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Case Docket No. 25068

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Sir:

Transmitted herewith for filing is the Patent Application of:

Inventor : **O. SHMUELI; B. YEHEZKEL**

FOR : **ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES**

jc857 U.S. PTO 10/347388 01/21/03

Enclosed are:

☒ **1 sheet of drawings**

☐ **Assignment to: _____**

☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

☐ **Sequence Listing Statement: The sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing**

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Respectfully,
Sol Sheinbein
Registration No. 25,457

16 January 2003

25068 03/10/2002

Inventor(s) : Oded Shmueli, Benny Yehezkel

Title of the Invention

Routing of data including multimedia between electronic devices

Relationship to Existing Applications

The present application claims priority from US Provisional Application No. 60/398,077, the contents of which are hereby incorporated herein by reference.

Field and Background of the Invention

The present invention relates to routing of data including multimedia between electronic devices, and more particularly but not exclusively to rerouting of incoming communications that may or may not include multimedia to devices other than the initial receiving device. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional.

With the introduction of mobile communication devices, telecommunications technology has transformed society over the past decade. The ability to communicate almost anywhere, anytime, with few geographical limitations has resulted in a society, in both social and business contexts, which is almost always on-line. Mobile communication devices today typically have data processing ability which allows them to handle multi-media, and different types of devices are today able to communicate with each other, either directly via a permanent or temporary link or indirectly via a network. Thus data, including multimedia, can be directed or routed from one device to another device. The idea of multi-media routing stems from the myriad of opportunities which present themselves in routing signals from one device or kind of device to another. However, in general, the playing of multimedia data is limited , at least in the short term, to the device on which it is received, or to those in which the data originates. This limitation can be a considerable limitation on the user's ability to enjoy the multimedia since different devices have very different capabilities regarding the playing of multimedia.

The media playing devices considered specifically in the present disclosure include both mobile devices (cell phones, PDA's, handheld devices, etc.) and non-

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mobile devices (land/fixed line phones, computer monitors, Hi-Fi sets, speakers, etc.). Some of the devices may be used for just one or two media types and others are more general in their applicability, which is to say it is possible to use the devices in different modes for playing several media types: voice, text, images, and video. Likewise, the devices are used in various locations: at the office, home, car, hotel room, plane, outdoors, etc.

Most current mobile devices in particular provide relatively poor multi-media capabilities including digital audio, image, and/or video capabilities (as well as other media capabilities) in comparison with other existing devices such as land/fixed line phones, computer monitors, TV screens and Hi-Fi sets. Compared to high quality media playing equipment, even 3rd generation mobile devices (3G) are of inferior quality.

A number of patent applications discuss rerouting of communications from one communication unit to another. An example is GB 2,370,451, which discloses a communication unit that detects the presence in its vicinity of a second communication unit and determines its identity. If the identity is found to be of a predetermined set (*e.g.* of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

WO0141317A3: call diversion system, discloses a system specifically for redirecting calls between satellite and terrestrial cellular systems. The disclosure addresses the issue of reformatting data messages for the transition.

Neither of the above systems takes into consideration the types of multimedia content of the incoming calls data or playing quality and usage comfort when deciding whether to redirect, and redirection is based on devices having a shared ownership or otherwise being part of a predetermined set. In the above-described systems the user typically has only limited control over rerouting. Nevertheless, it would be highly advantageous to provide the user with the ability to select a target device, based on the type of multimedia content, and furthermore to choose a device for play or storage of the content independently of the initially targeted or originating device.

Summary of the Invention

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According to a first aspect of the present invention there is thus provided data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

The apparatus preferably further comprises a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

Preferably, said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

Preferably, a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

The apparatus preferably further comprises a media cloner for making multiple copies of the data, in particular but not exclusively an incoming communication, thereby to enable said apparatus to redirect, for example, a single incoming communication to a plurality of locations.

Preferably, said announcer is an active device, operable to transmit at least status information to respective surroundings.

Preferably, said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

Preferably, said passive device further carries status information of said device.

Preferably, said announcer comprises a barcode and wherein said scout is a barcode reader.

The apparatus preferably further comprises an outgoing multimedia transmitter for directing rerouted media directly to a selected device.

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The apparatus preferably further comprises control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

The apparatus preferably comprises control functionality operable to carry out said rerouting directly.

The apparatus preferably comprises control functionality operable to carry out said rerouting through locally available network infrastructure.

The apparatus preferably comprises a device database for storing compatibility data of different equipment types.

According to a second aspect of the present invention there is provided a method of rerouting data comprising:

Receiving or generating said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

The method preferably comprises determining compatibility of said available devices in said vicinity with said communication.

The method preferably further comprises carrying out media type transformation from a media type of said data to a media type compatible with a selected device.

The method preferably further comprises carrying out selection between devices found to be available, via a user interface.

The method preferably further comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

The method preferably further comprises selecting a plurality of devices to reroute said data thereto, and cloning said data for each selected device.

The method preferably further comprises determining availability of other devices in the vicinity of said target device, and

rerouting said data to at least one further target device selected from devices found to be available.

According to a third aspect of the present invention there is provided a data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

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a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Brief Description of the Drawings

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, purely by way of example, to the accompanying drawings.

With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice. In the accompanying drawings:

Fig. 1 is a simplified diagram showing a plurality of electronic devices in the vicinity of one another, between which communications can be rerouted according to a preferred embodiment of the present invention, and

Fig. 2 is a simplified block diagram showing a preferred apparatus for attachment to an electronic device for allowing the device to support rerouting according to preferred embodiments of the present invention.

Description of the Preferred Embodiments

The capability of routing of multi-media content (possibly including media transformation and multiplication, i.e. cloning) from one device to another may dramatically upgrade media playing quality, and grant the user the liberty to play the content on any device he wishes, preferably the most suitable device available, regardless of the origin of the content or the device to which the content may initially

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have been directed, or at which the content originates. Furthermore, by rerouting to a more capable device, a user's satisfaction level may be increased in comparison to having to remain with a device that say is limited by inferior data rate, processing power, memory capacity or input/output facilities. For example, a cellular communication device such as a mobile telephone is such a limited capability device which is typically the initial recipient of a communication. Such an initial recipient, or originator, is referred to hereinafter as the routing-source device. Furthermore, as will be explained below, the ability to route content from non-mobile, that is land or fixed devices to nearby mobile and other devices permits a range of possibilities for use which is currently not provided for.

For example, the ability to route an incoming phone call, typically comprising voice, from a mobile device to a land/fixed line phone may generally be expected to upgrade the quality of the call. The ability to route hand held calendar content from a mobile device having some digital ability to a computer monitor, may allow for better viewing of the information. Such rerouting may also enhance the user's ability to share the information with other people or with computer applications, for example applications that capture information displayed on the monitor and use it to trigger other events. Such applications can easily be run on a PC or laptop computer but are difficult to run on a mobile telephone for example.

An incoming call or other originating data may be rerouted more than once. In preferred embodiments, individual devices do not need to know whether they are an initial receiving device or a first or subsequent rerouting device, and may treat any arriving communication in the same way.

Furthermore, a preferred embodiment of the present invention provides an ability to route an incoming voice message from say a mobile device or voice mailbox to a facsimile machine or display monitor, combined with a transformation capability – in this case an ability to transform voice to text. Software packages that interpret voice and translate into text are well known and commercially available. Such packages, which presently require training on a specific voice in order to produce reasonable results, may broaden the usage of voice messages. However, even without training, the best packages can produce sufficiently good results to enable say the hard of hearing to make a reasonable interpretation of an incoming voice signal. Thus such a rerouting-while-transforming capability may be highly desirable for people with special needs - impaired senses (hearing, vision) who may use such a capability to

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receive information in a form more usable to them. Likewise such a capability may be useful for receiving communications in difficult environments such as a noisy factory floor.

As a further example, an incoming phone call directed at a land/fixed line may be rerouted to a mobile device, thus, effectively using the mobile as a cordless phone. Such a technique may ease acceptance of a phone call in a hotel lobby, at a colleague's office, at a restaurant and in many other settings.

Routing an incoming call away from a mobile telephone may also be advantageous health-wise in decreasing the physical proximity of electromagnetic radiation (emitted by mobile devices) to the user.

It is pointed out that communication-enabled devices can receive an incoming communication for rerouting. However as long as rerouting is direct from device to device, the device to which the rerouting is made need not be generally enabled for external communication as typically managed by a service provider be it phone, cellular, internet and the like. Furthermore, routing is not limited to rerouting of incoming communications but also applies to routing of data from any kind of data source to any kind of data player. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional. Thus video data being captured at a video camera may be directed using embodiments of the present invention to a convenient nearby video player or multimedia enabled PC. Thus, a generally non-communication enabled device will be unable to receive initial communications but can route data to other devices and can receive data as a rerouting target.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is applicable to other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

Reference is now made to Fig. 1, which is a simplified schematic diagram showing a cellular telephone 10 in proximity to a fixed telephone 12 and a computer monitor 14. The three electronic devices need have no relationship to each other

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except that of proximity. An incoming call is received at cellular telephone 10. As will be explained below, the cellular telephone 10 detects the presence of the other devices 12 and 14 and allows the user to retain the call at the cellular telephone 10 or alternatively to transfer it to either of the other devices 12 and 14. If the user chooses the fixed telephone 12 then the call is rerouted in one of a number of ways explained below to the fixed telephone 12 where the call may be taken in the usual way. If the user chooses the computer monitor 14 then assuming the presence of speakers and a microphone the call may be taken again in the normal way. In addition, software may be provided, either at the cellular telephone 10 or at the computer 14 to convert the voice signal into text.

It is noted that in the case of a cellular telephone, the telephone communication is a bi-directional type of communication, and any rerouting should preferably support a return path for the communication.

In addition, using the above rerouting, a call can be set up to support a game session. The call can be set up using a cellular telephone, and then one or both users reroutes the call to a game console.

The above may be achieved by sending rerouting control data along with the rerouted communication, which control data includes a return address. The return address may be a final return address for single stage rerouting, or may be an intermediated return address in the case of multi-stage rerouting. In the latter case, the intermediate return address can be used in an intermediate rerouting device to find a further rerouting address.

Reference is now made to Fig. 2, which is a simplified block diagram showing in schematic form the elements of a modification to be applied to a communication device for use in call rerouting of the kind described in Fig. 1. It will be appreciated that the elements are not restricted to a cellular telephone but may be applicable to any electronic device and more particularly but not exclusively to communication-enabled devices. Depending on the device type, some functionality may be disabled. For example, a land/fixed line phone might not need an outgoing multi-channel multi-media transmitter component. A device not enabled for external communication may not be able to receive originating communications from an external communication network but may be able to route data to other devices and be the target for data and communication rerouting.

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The device comprises an incoming multi-media receiver 20 which is responsible for capturing media content and passing it to one of the other components in the device, depending on the circumstances, as will be explained below. One of these other components is outgoing multi-channel multi-media transmitter 22. Transmitter 22 is responsible for transmitting (directly) media streams to external devices which are specified to it. Transmitter 22 comprises a multi-channel port which is able to transmit several media types to several devices at the same time.

A media transformer 24 is responsible for transforming its input (incoming media) into a required media type, or types, and outputting the resulting media stream(s), or file(s). It too preferably has a multi-channel Output. The media types required as output are preferably specified externally. A preferred embodiment of a media transformer includes a voice to text transformer as discussed above. The voice to text transformer may be augmented by a text to fax transformer. Further transformations include image transformations such as color to black and white, resolution reductions, and image format transformations. Similar transformations may be provided for video, and to the extent applicable for sound formats.

Media cloner 26 is responsible for duplication of its input channel content, preferably received from the incoming multi-media receiver 20 (input media) into as many output channels as indicated to it externally. Each output stream, or file, is routed, as indicated to it externally, to either the media transformer 24 or the outgoing multi-media transmitter 26.

Controller 28 is responsible for managing all the other components and monitoring their activities. In particular, any media (packaged or streamed) transfer between components, input and output, is performed under the controller's supervision.

In operation, content is received at incoming multimedia receiver 20. As will be explained in detail below, one or more destinations for the data as well as media type transformations are selected. In the case of straightforward rerouting of the media to another device, the content is sent directly to outgoing multi-media transmitter 22 for simple media routing to a similar content type device. In other circumstances, transforming from one media to another may be required prior to rerouting. In such a case, content is directed to media transformer 24 prior to rerouting, where transforming is carried out. The transformed content is then directed to the outgoing multi-media transmitter 22 as before. Content is directed to media

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cloner 26 in cases where it is intended to route the content to more than one device, or if for any reason it is intended to send multiple copies to the same device. From the media cloner the content may then be sent directly to the outgoing multi-media transmitter 22 for direct output, or one or more of the copies may be sent to the media transformer for transformation prior to output. Routing of the content and operation of the above-mentioned components is preferably controlled by controller 28.

In order to make decisions about selecting destinations and media types and in order to allow other devices to receive availability information, three more components are preferably provided, an announcer device 30, a scout device 32 and a device library 34.

The announcer device 30 is responsible for announcing to the environment the availability of a current device for accepting routed media. It may also indicate device type and use conditions, preferably including any usage charges, thus enabling surrounding devices to avoid say sending video data to a fax machine, or enabling security conscious users to avoid receiving non-trusted data at their device. When the device becomes busy (for example, a phone that is handling a call), it announces this to the environment, typically via transmissions. Similarly, it announces its becoming available. Announcements may be periodically repeated. As an alternative the announcer device 30 may signal only when available or only when unavailable. Another (optional) function of the announcer 30 is that of informing the environment, typically a user, that media content has been routed to it and is now usable (for example, to announce that a rerouted call is now available on this telephone). The latter kind of announcement, that is to say to persons rather than to electronic equipment, may typically comprise light flashes, rings, a loudspeaker sound or even a smell.

Typically, the announcer device 30 may be active (transmitting) or passive (reacting, or reflecting). A simple example of a passive announcer device is a sticker attached to a phone and supplying say device type and conditions of use information using a barcode. The sticker may be scanned and comprehended by the scout devices 32. In addition to a sticker, a passive announcer may be provided using an LCD screen displaying a barcode. The LCD or like screen is advantageous in that, since its display can change, the barcode can indicate current status information. An alternative way of providing status information along with a barcode is by providing a color display alongside the barcode. The color display may be changed electronically

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or mechanically by the device to indicate different states, and can be read optically along with the barcode.

The scout device 32 is responsible for scanning the environment to find other devices therein and to determine their status, typically free or busy. The scout is also responsible for obtaining any specific use conditions from announcers 30 of the devices being detected. The scout may be activated periodically and/or upon demand.

Device library 34 contains information needed for communicating with various devices. Such information may typically include usage related information as well as technical information regarding expected media formats and transmission technology specifications, including protocols, used by the device type. It may also contains pre-defined user preferences if defined, including default user preferences.

The controller 28 is responsible for integrating knowledge accumulated by the scout, and for directing operation of the announcer 30. The controller uses either pre-defined user preferences from the device library 34 or it may obtain preferences over a network, or it may simply capture user preferences using menus or like user interaction. The controller preferably follows the appropriate receiving/transmitting protocol including hand shake, identification, authentication, encryption procedures and the like.

The apparatus described in respect of Fig. 2 may be physically packaged, for example as a card, a chip or an attached stand-alone unit. The apparatus may also be realized as software within another apparatus, host device - for example, on a personal computer (PC), cell phone, a personal digital assistant (PDA) or other standard electronic devices. In any case, the host apparatus preferably possesses its own transmission and receiving capabilities, or is connected, perhaps via a network, to another device that does have such capabilities.

For example, a host cellular telephone may use already installed IR for scouting and announcing or any of the previously described technologies. A PC may use an existing peripheral digital camera for scouting and local network devices for transmission.

In many situations, as briefly described in previous examples, certain apparatus activities may be initiated via user interaction, and preferred ways of enabling user interaction comprise displaying menus, or using voice menus, or conceivably even using feel or smell menus. Certain actions are preferably taken automatically, that is to say without user interaction. Such automation may be based

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on profiles, terms, and conditions. Conditions may for example be associated with the device that performs the routing, as well as with a device to which media is routed. Profiles may be stored with the modification apparatus of Fig. 2 or obtained from remote sources.

Menus may be activated in the following modes:

a) Automatic pop-up menu upon event (incoming call, message etc.)

b) Manual (menu) activation ("always on".)

To protect against hostile or non-trusted parties, the modification preferably provides some level of firewall protection for both receiving and transmitting components. Such protection may comprise identification and/or authentication, and may comprise restrictions on routing or receiving information to devices whose owners are not trusted. In addition, to protect privacy, transmitted information may be encrypted.

Considering the outgoing multi-media transmitter 22 in greater detail, the transmitter may incorporate one or more of the following transmission technologies for transmitting media to a nearby device:

- Infra-red (IR)
- Microwave
- Radio (any suitable frequency)
- Sound waves
- Ultrasound
- Wire (and cable) transmission technologies
- Light (visible)
- Laser
- Chemical (mainly smell)
- Quantum techniques

and other technologies that will occur to the skilled person. The choice of technology may depend on general and specific circumstances, such as the type of data to be transmitted, the environment of the transmission, safety and like considerations, and compatibility with as many as possible other devices.

As described above, rerouting may be direct, that is device to device. Direct (local) routing between devices uses one or more of the technologies specified above but does not usually use any external service provider services, network, or

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infrastructure. Such routing may however use a local computer network, for example cable or radio-based, or simple end-to-end communication (for example, IR communication between two or more devices).

In addition, rerouting may be indirect. Indirect non-local routing relies on external service provider services, network and infrastructure. Indirect routing still requires the device initially receiving the communication to detect available receiving devices and determine their capability and availability and also requires potential rerouting recipients to announce their capabilities to the environment. The device initially receiving the communication then makes a decision, typically with the help of user interaction, to determine whether to reroute the message and if so to what device, just as before. However the rerouting information is then sent to the external provider who carries out the rerouting of the communication by switching at the exchange. Such a switching method can take advantage of higher data rates over land lines as opposed to wireless connections.

A third rerouting mode uses local network infrastructure to carry out the rerouting. The communication is routed through a local area network (LAN), or a wide area network (WAN) infrastructure with information to indicate to the network which device has been selected for rerouting. However the network has to interpret the information to decide how to route the information. Either kind of rerouting through the available network infrastructure may be useful, for example for rerouting of an incoming phone call from a cellular telephone to a colleague in another room within the same organization.

There are many ways to exploit the capability to route different content (media) types between different devices. Using only rerouting, one may route one form of content (for example audio) only to devices that handle audio (for example, routing an audio stream to nearby speakers). Using rerouting combined with a media type transformation capability, one may route content transformed specifically for a receiving device. Thus for example voice may be transformed into text and then routed to a fax machine. It may also be possible to transform color images to smell and reroute them to a device able to output smell. Finally, cloning allows the same content to be sent to several devices, and combinations of different transformations for different devices may allow additional dimensions to incoming multi-media. Thus, for example an incoming signal comprising music and voice could be cloned. One of the clones could be transformed into text and transmitted to a monitor able to

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display text. The other clone could be transmitted to speakers to give high quality reproduction of the music. As a further variation, if the incoming music signal is initially directed at a mobile device, it could first of all be rerouted at the service provider level to a land device so as to support a better data rate and then cloned and redirected for text output as described above. Thus high quality audio play of the music can be combined with a display of the words of the song.

The list below describes typical device/media type combinations for rerouting capability. It is noted that not all the devices are typical external-communication-enabled devices. As mentioned above, non-external-communication enabled devices may not receive original incoming communications but they can route data to other devices and receive data as rerouting targets.

1. Audio and Voice

Audio, and voice type media may be routed from devices including cellular telephones and other cellular or mobile devices including voice enabled PDA's, two-way radios etc., land or fixed line telephones, voice mail boxes (voice messages), Hi-Fi sets, both mobile and non-mobile including radio receivers, MP3 players, Cassette, CD, DVD and VCR players, and the like, and TV sets.

Audio and voice-type media may typically be routed to land or fixed line telephones, cellular telephones and like cellular mobile devices, Hi-Fi sets (mobile and non mobile), car audio systems, TV sets, speakers, and LAN/WAN servers and like infrastructure.

2. Video

Video media may be routed from cellular telephones, especially 2.5G and 3G devices, and other similar hand held devices, DVD and VCR players – both mobile and non-mobile, video cameras and recorders, monitors (screens) including those of TV sets, computer monitors, etc. mobile game devices (for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure.

Video media may typically be routed to cellular telephones and especially 2.5G and 3G devices, other cellular hand held devices, monitors (screens) including those of TV sets, computer monitors, etc. DVD and VCR players – including both mobile and non-mobile devices, video cameras and recorders, mobile game devices

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(for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure etc.

3. Text

Text type data may be routed from cellular telephones where they may be in the form of SMS, email messages and the like, other hand-held devices, unified messaging mail boxes, electronic books, standard computers, and the like.

Such text type data may be routed to monitors (screens) – including TV sets, computer screens, etc. printers, facsimile machines, cellular telephones and other hand held devices, unified messaging mail boxes and LAN/WAN servers and like infrastructure, etc.

4. Images

Image data may typically be routed from digital cameras, facsimile machines, monitors (screens) including TV sets, computer screens, etc., digital vision-oriented equipment such as microscopes, telescopes, binoculars, etc.

Such image data may be routed to cellular telephones, especially 2.5G and 3G devices, other hand held devices, monitors (screens) - including TV sets, computer screens, etc. digital cameras, facsimile machines, printers, unified messaging mail boxes, and LAN/WAN servers and like infrastructure.

As stated earlier, combining the routing capability with the media transformation capability in principle enables routing of any media between any pair of devices appearing in the lists above. Furthermore, combined with cloning, media may be used in different ways at different devices. Such different ways may even be carried out concurrently, thus enabling the simultaneous routing of any media type to any number of devices.

The following is a series of procedure flows for different scenarios.

In the scenarios, appropriate combinations of Routing, Transforming and Cloning an incoming communication are selected to fit the circumstances.

Scenario 1

1. A person carrying a mobile phone enters his colleague's office

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2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the person's cell phone

4. The cell phone detects the said land/fixed line phone and monitor

5. A pop up menu appears on the cell phone display and after the person acknowledges, the phone call is routed to the land/fixed line phone

6. The land/fixed line phone flashes to indicate an incoming call

7. The person receives the call on the land/fixed line phone

8. The person wishes his colleague to be aware of what's being said on the other side of the line

9. He activates a menu on the cell phone display and chooses the "Clone to Monitor" option

10. The monitor shows the conversation text as it is carried out, enabling the colleague to monitor the conversation's content in text form

Scenario 2

This scenario is similar to scenario A. The difference is:

5. The phone call is automatically routed to the land/fixed line phone (based on the person's preferences and environment scanning and detection)

Scenario 3

1. A person, say Smith, carrying a cell phone is sitting in a hotel lobby

2. In the lobby there are four land/fixed line phones

3. A phone call arrives at the person's cell phone

4. Option A:

a. The person points his phone at one of the land/fixed line phones

b. The cell phone detects the said phone as busy

c. The person points his phone at another land/fixed line phones

d. The phone call is routed to that, available, land/fixed phone

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e. The chosen land/fixed phone rings, or flashes to indicate the rerouted call

5. Option B:

a. While ringing, the cell phone indicates on its display that a nearby phone is available

b. The person approves the routing of the call to that nearby phone

c. The nearby phone rings, or flashes to indicate the rerouted call

6. Option C:

a. The call is automatically routed to an available nearby phone

b. The person is notified of the routing on the cell phone display

c. In parallel, the nearby phone uses a loudspeaker to announce the call by calling out Smith's name

d. The nearby phone rings, or flashes to indicate the rerouted call

7. The person receives the call on the available/chosen land/fixed line phone

Scenario 4

1. A hearing impaired person carrying a cell phone enters his colleague's office

2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the colleague's land (fixed) line phone

4. The colleague receives the call and at some point wishes his friend (the hearing impaired person) to participate in the conversation

5. The colleague then clones the voice conversation to both:

i) His monitor (the voice is then transformed to text and appears, as it is spoken, on the monitor)

ii) The hearing impaired person's cell phone

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6. The hearing impaired person "hears" the conversation by reading the text appearing on the monitor

7. The hearing impaired person speaks to his cell phone microphone and can thereby participate in the conversation

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Unless otherwise defined, all technical and scientific terms used herein have the same meanings as are commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods are described herein.

All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the patent specification, including definitions, will prevail. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described hereinabove. Rather the scope of the present invention is defined by the appended claims and includes both combinations and subcombinations of the various features described hereinabove as well as variations and modifications thereof which would occur to persons skilled in the art upon reading the foregoing description.

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Claims

1. Data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

2. Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. Apparatus according to claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

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7. Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.
Apparatus according to claim 1, wherein said data originates at the device embedding the apparatus.

16. Apparatus according to claim 1, wherein said data is unidirectional.

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17. Apparatus according to claim 1, wherein said data is multidirectional.

18. Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. Data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. A method of rerouting data comprising:

receiving said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

21. The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

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25. The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

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Abstract

Rerouting apparatus for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

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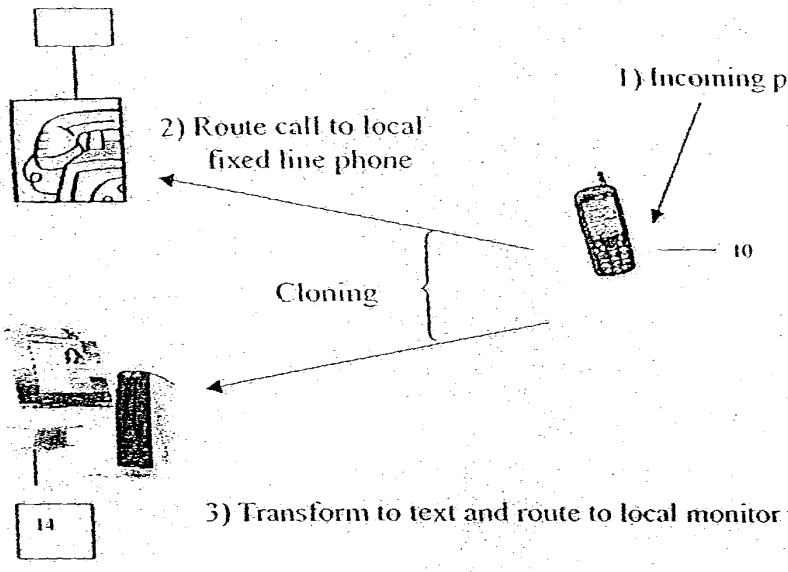

1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

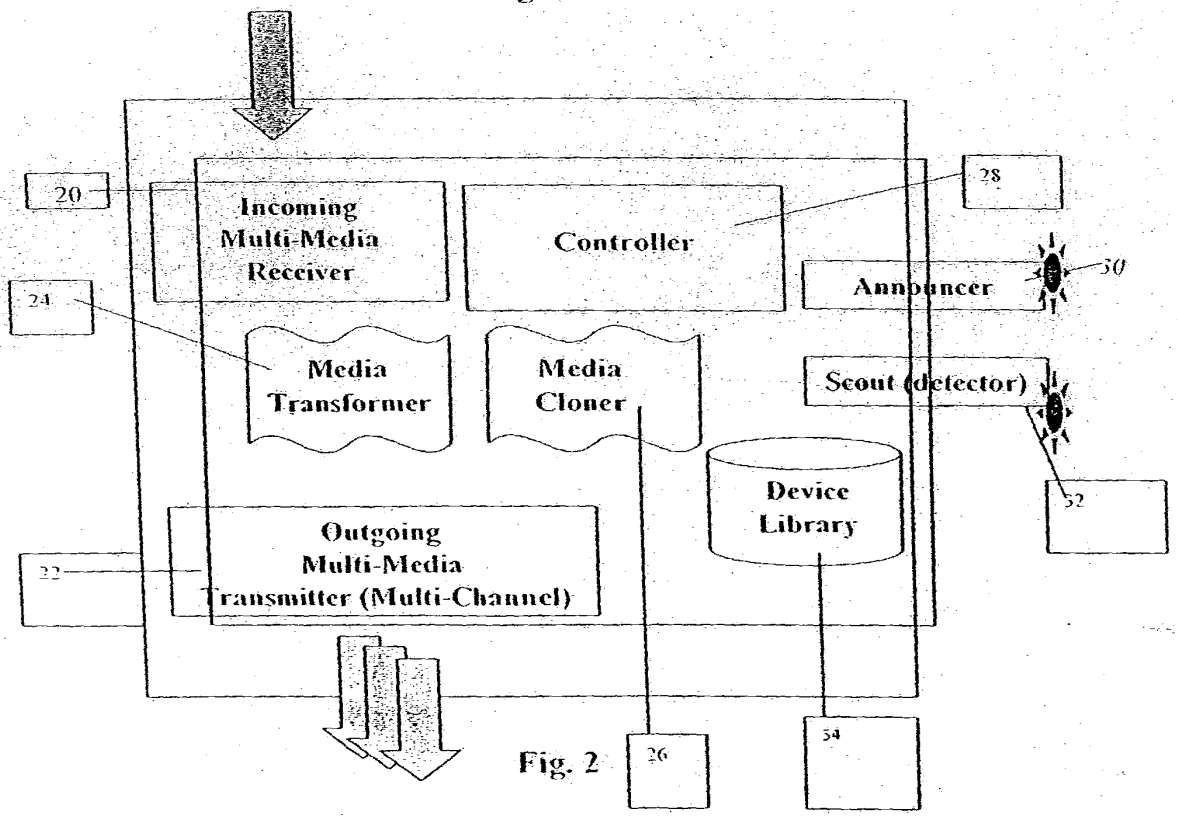

20
Incoming Multi-Media Receiver
Controller
28
Announcer
30
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
Outgoing Multi-Media Transmitter (Multi-Channel)
22
26
34

Fig. 2

10347388.012103

Express Mail Label No.

Docket No. **25068**

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

the specification of which

☑ is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International Application Number _____ and was amended on _____

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Not Claimed
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	☐

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Apple EX1002 Page 26

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

60/398,077	25 July 2002
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U.S.C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112. I acknowledge the duty to disclose to the United States Patent and Trademark Office all the information known to me to be material to patentability as defined in Title 37, C.F.R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

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D'vorah GRAESER,	Registration Number 40,000
Martin MOYNIHAN	Registration Number 40,338
Rochel ABBOUDI,	Registration Number 44,490

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Fax No. (703) 415-4864

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Second inventor's signature	Date
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Citizenship	: Israeli
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Apple EX1002 Page 28

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Sol SHEINBEIN,	Registration Number 25,457
D'vorah GRAESER,	Registration Number 40,000
Martin MOYNIHAN	Registration Number 40,338
Rochel ABBOUDI,	Registration Number 44,490

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Sole or first inventor's signature _____ Date _____

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Citizenship	: Israeli
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FULL NAME OF SECOND INVENTOR , IF ANY **Benny YEHEZKEL**

Second Inventor's signature _____ Date October 10, 2002

Residence	: 74 Bialik Street, 52 441 Ramat Gan, Israel
Citizenship	: Israeli
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DIRECTOR OF PATENTS AND TRADEMARKS 10347388.012103
WASHINGTON D.C. 20231 **Case Docket No. 25068**

01/21/03 jc623 U.S. PTO

Sir:

Transmitted herewith for filing is the Patent Application of:

Inventor : **O. SHMUELI; B. YEHEZKEL**

FOR : **ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES**

jc857 U.S. PTO 10/347388 01/21/03

Enclosed are:

☒ **1 sheet of drawings**

☐ **Assignment to: _____**

☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

☐ **Sequence Listing Statement: The sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing**

☐ **Priority Document of _____**

THE FILING FEE HAS BEEN CALCULATED AS SHOWN BELOW:

FOR:	*Column 1 No. FILED*	*Column 2 No. EXTRA*	*SMALL ENTITY* *RATE*	*FEE*	*OTHER THAN A SMALL ENTITY* *RATE*	*FEE*
Basic Fee				$ 375		$ 740
Total Claims	27 - 20=	7	7 x $ 9	$ 63	x $18	$
Independent Claims	3 - 3=		x $42	$	x $84	$
☐ Recordal of Assignment $40			+$40	$	+$40	$
(If the difference in Column 1 is less than "0", enter "0" in Col. 2)			TOTAL	**$ 438**	TOTAL	$ ____

☒ **Please charge my deposit account No. 50-1407 in the amount of $438.**
A duplicate copy of this sheet is enclosed.

☒ **The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No 50-1407. A duplicate copy of this sheet is enclosed.**

☒ **Any additional filing fees required under 37 CFR 1.16.**

☒ **Any patent application processing fees under 37 CFR 1.17.**

☒ **The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to deposit Account No. 50-1407. A duplicate copy of this sheet is enclosed.**

☒ **Any patent application processing fees under 37 CFR 1.17**

☒ **Any filing fees under 37 CFR 1.16 for presentation of extra claims.**

Respectfully,
Sol Sheinbein
Registration No. 25,457

16 January 2003

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

01/22/2003 HVUONG1 00000050 501407 10347388

01 FC:2001 375.00 CH
02 FC:2202 63.00 CH

PTO-1556
(5/87)

*U.S. Government Printing Office: 2001 — 481-697/59173

PATENT APPLICATION FEE DETERMINATION RECORD
Effective January 1, 2003

Application or Docket Number: 25068

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	27	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	27 minus 20=	* 7
INDEPENDENT CLAIMS	3 minus 3 =	* —
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐ OR OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
BASIC FEE	$375	OR	BASIC FEE	$750
X$ 9=	63	OR	X$18=	
X42=	—	OR	X84=	
+140=	—	OR	+280=	
TOTAL	438	OR	TOTAL	

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X42=		OR	X84=	
+140=		OR	+280=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
***If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

SERIAL NO. 10 347388 FILING DATE 1-21-03

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1ST AMENDMENT		AFTER 2ND AMENDMENT	
	IND	DEP	IND	DEP	IND	DEP
1	1					
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TOTAL CLAIMS	27					

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TOTAL IND.						
TOTAL DEP.						
TOTAL CLAIMS						

PTO-1360 (12/02)

*MAY BE USED FOR ADDITIONAL CLAIMS OR AMENDMENTS

U.S. DEPARTMENT of COMMERCE
Patent and Trademark Office

OIPE IAP45 OCT 31 2005 PATENT & TRADEMARK OFFICE

TD

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of			
	SHMUELI Oded et al		
Serial No.:	10/347,388		
Filed:	January 21, 2003	Group Art Unit:	2667
For	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES		
Examiner:	Anh Vu H. Ly	Attorney Docket:	**25068**

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

CHANGE OF ADDRESS

I am agent of record on the above-identified application.

Please address all future correspondence on the above-identified application to:

Martin D. Moynihan
PRTSI, Inc.
P. O. Box 16446
Arlington, VA 22215

Please continue to use the telephone and fax number as it appears on the Power of Attorney form.

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: October 27, 2005

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp	
S1	100	(shmueli.in.) or (yehezkel.in.)	US-PGPUB; USPAT	OR	ON	2007/01/17 15:11	
S2	19445	rerout$4 or re-rout$4	US-PGPUB; USPAT	OR	ON	2007/01/17 16:01	
S3	15821	S2 and bar-code or barcode	US-PGPUB; USPAT	OR	ON	2007/01/17 15:16	
S4	352	S2 and (bar-code or barcode)	US-PGPUB; USPAT	OR	ON	2007/01/17 16:02	
S5	290	S4 and (media or multimedia or multi-media)	US-PGPUB; USPAT	OR	ON	2007/01/17 16:02	viewed
S6	91102	rerout$4 or re-rout$4 or redirect$4 or re-direct$4	US-PGPUB; USPAT	OR	ON	2007/01/17 16:01	
S7	1450	S6 and (bar-code or barcode)	US-PGPUB; USPAT	OR	ON	2007/01/17 16:02	
S8	1066	S7 and (media or multimedia or multi-media)	US-PGPUB; USPAT	OR	ON	2007/01/18 08:38	
S9	70159	data near8 (copies or copy or copying or cloning or clone)	US-PGPUB; USPAT	OR	ON	2007/01/17 16:06	
S10	220	S8 and S9	US-PGPUB; USPAT	OR	ON	2007/01/18 08:37	viewed
S11	91256	rerout$4 or re-rout$4 or redirect$4 or re-direct$4	US-PGPUB; USPAT	OR	ON	2007/01/18 10:45	
S12	70318	data near8 (copies or copy or copying or cloning or clone)	US-PGPUB; USPAT	OR	ON	2007/01/18 08:39	
S13	4343	S11 and (media or multimedia or multi-media) and S12	US-PGPUB; USPAT	OR	ON	2007/01/18 10:44	
S14	407391	data near8 (transform$4 or conver$5 or format$4)	US-PGPUB; USPAT	OR	ON	2007/01/18 08:40	
S15	2750	S13 and S14	US-PGPUB; USPAT	OR	ON	2007/01/18 08:40	
S16	365	S15 and "370"/$.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 10:43	
S17	410	379/93.09.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 10:44	
S18	69700	(media or multimedia or multi-media) adj3 device	US-PGPUB; USPAT	OR	ON	2007/01/18 10:44	
S19	985224	rerout$4 or re-rout$4 or redirect$4 or re-direct$4 or forward$4	US-PGPUB; USPAT	OR	ON	2007/01/18 10:45	
S20	35676	compatib$5 adj3 (type or device or equipment or terminal or format)	US-PGPUB; USPAT	OR	ON	2007/01/18 10:46	
S21	1364	S18 and S19 and S20	US-PGPUB; USPAT	OR	ON	2007/01/18 10:47	

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EAST Search History

S22	2	S21 and S17	US-PGPUB; USPAT	OR	ON	2007/01/18 11:00	viewed
S23	174	S21 and "370"/$.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 15:20	viewed
S24	5	S21 and "370"/351.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:10	viewed
S25	20	S21 and "370"/352.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:27	viewed
S26	0	S21 and 379/93.15.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:27	
S27	1	S21 and 379/211.02.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:27	viewed
S28	0	S21 and 379/211.01.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:27	viewed
S29	49	S21 and "379"/$.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:47	viewed
S30	0	S21 and 455/417.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:48	
S31	76	S21 and "455"/$.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 12:48	viewed
S32	213	S21 and "709"/$.ccls.	US-PGPUB; USPAT	OR	ON	2007/01/18 15:20	viewed
S33	185	S32 not (S23 or S29 or S31)	US-PGPUB; USPAT	OR	ON	2007/01/18 15:20	viewed
S34	70	data near7 clon$4 near7 multiple	US-PGPUB; USPAT	OR	ON	2007/01/19 10:43	viewed
S35	0	data near7 clon$4 near7 multiple near7 (transmit$4 or send$4)	US-PGPUB; USPAT	OR	ON	2007/01/19 10:44	
S36	0	data near7 clon$4 near7 multiple near20 (transmit$4 or send$4)	US-PGPUB; USPAT	OR	ON	2007/01/19 10:44	
S37	5	data near7 clon$4 near7 multiple same (transmit$4 or send$4)	US-PGPUB; USPAT	OR	ON	2007/01/19 10:44	viewed
S38	11818	media near3 transform$4	US-PGPUB; USPAT	OR	ON	2007/01/22 09:36	
S39	2225	media adj transform$4	US-PGPUB; USPAT	OR	ON	2007/01/22 09:59	
S40	8867	media adj (format$4 or reformat$4 or transform$5)	US-PGPUB; USPAT	OR	ON	2007/01/22 10:00	
S41	9515	(multimedia or media) adj (format$4 or reformat$4 or transform$5)	US-PGPUB; USPAT	OR	ON	2007/01/22 10:00	
S42	190	(user adj interface) same S41	US-PGPUB; USPAT	OR	ON	2007/01/22 10:03	

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Apple EX1002 Page 36

EAST Search History

S43	151	((media or data) with (deliver$4 or transmit$4 or send$4 or forward$4)) and S42	US-PGPUB; USPAT	OR	ON	2007/01/22 10:05	
S44	8	((select of choose or decide) with (media adj (format or type))) and S43	US-PGPUB; USPAT	OR	ON	2007/01/22 10:06	
S45	8	((select or choose or decide) with (media adj (format or type))) and S43	US-PGPUB; USPAT	OR	ON	2007/01/22 10:06	viewed
S46	3461	compatibility near3 determin$4	US-PGPUB; USPAT	OR	ON	2007/01/23 15:28	
S47	0	S46 with (prior adj5 transmi$6)	US-PGPUB; USPAT	OR	ON	2007/01/23 15:28	
S48	1	S46 same (prior adj5 transmi$6)	US-PGPUB; USPAT	OR	ON	2007/01/23 15:29	viewed
S49	3	S46 same ((before or prior) adj5 transmi$6)	US-PGPUB; USPAT	OR	ON	2007/01/23 15:29	viewed
S50	238	S46 same (transmi$6 or send$4)	US-PGPUB; USPAT	OR	ON	2007/01/23 15:31	
S51	180	(transform$4 or format$) and S50	US-PGPUB; USPAT	OR	ON	2007/01/23 15:32	
S52	1342705	media or data same S50	US-PGPUB; USPAT	OR	ON	2007/01/23 15:32	
S53	117	(media or data) same S50	US-PGPUB; USPAT	OR	ON	2007/01/23 15:35	viewed

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

7590 07/05/2007

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EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
07/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	Ju-Tai Kao	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 01/21/2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: typographical error.

On page 9 of the specification, "multi-media transmitter" on line 21 should be numbered "22" instead of "26" according to Fig. 2.

Appropriate correction is required.

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claim 15 currently consists of two different claims. For the purpose of this office action, line 1-2 and line 3-4 of the claim would be examined separately.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

> by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-2, 7, 11, 13, 15-16, 18, 20, and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Ortiz (US 2002/0058499).

Regarding claim 1, Ortiz shows an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom comprising the data brokering between wireless devices (WDs) and data rendering devices (DRDs) (page 4, paragraph 48, line 1-3), wherein data brokering includes the negotiation, management, coordination and/or facilitation of data movement and use between and throughout DRDs, WDs and networks (page 4, paragraph 46, line 14-16) and thus inherently must include the announcement of available data to be transferred from the WDs.

Ortiz also shows a scouting device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto comprising a locating/finding technology that enable wireless device (WD) users

to locate available data rendering devices (DRDs) based on DRD's proximity to a roaming WD's location (page 5, paragraph 49, line 8-11).

As of claim 2, Ortiz shows all elements in the parent claim, and additionally shows a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto comprising the function that allows the WD user to choose to render data at the DRDs identified by the network (page 5, paragraph 49, line 16-19; page 5, paragraph 48, line 37-40).

As of claim 7, Ortiz shows all elements of the parent claim and further shows the announcer is an active device, operable to transmit at least status information to respective surroundings comprising the WD first achieving communication with the DRD (page 6, paragraph 59, line 1-6), which is an active step, then transmits issues a command and transmits data to the DRD (page 6, paragraph 58, line 4-8), wherein the command and data transmission is also an indication that the WD is currently in the status of transmitting data.

As of claim 11, Ortiz shows all elements in the parent claim and further shows an outgoing multimedia transmitter for locally directing rerouted media to a selected device comprising the WD providing data directly to a DRD via IR or RF communication (page 6, paragraph 59, line 1-2) wherein data refers to multimedia data (page 1, paragraph 4, line 1-5).

As of claim 13, Ortiz shows all elements in the parent claim and further shows a control functionality operation to carry out said rerouting through locally available network infrastructure comprising the DRD that can receive data directly from WDs and or through wireless networks or intranets (page 4, paragraph 46, line 11-14).

As of claim 15, Ortiz shows all elements in the parent claim and further shows the data is an incoming multimedia communication received from a communication network comprising the WD retrieving data from multimedia database resources available to the WD over networks (page 4, paragraph 47, line 32-37).

Regarding the second portion of the claim, Ortiz shows all elements in the parent claim and further shows that the data originates at the device embedding the apparatus comprising memory located on the WD that contains the data (Fig. 3, item 36; page 5, paragraph 50, line 4, 25-30).

As of claim 16, Ortiz shows all elements in the parent claim and further shows that the data is unidirectional comprising the WD providing data to a DRD (page 6, paragraph 59, line 1-2).

As of claim 18, Ortiz shows all elements in the parent claim and further shows a device database for storing compatibility data of different equipment types comprising

unique control functions or signals of different DRDs being stored on the memory of the WD (page 5, paragraph 50, line 9-14).

As of claim 20, Ortiz shows a method of receiving said data at a first device comprising the WD retrieving data from multimedia database resources available to the WD over networks (page 4, paragraph 47, line 32-37); determining availability of other devices in the vicinity of said first device comprising the WD locating available DRDs based on a DRD's proximity to the WD's location (page 5, paragraph 49, line 8-12); rerouting said data to at least one target device selected from devices found to be available comprising a function that allows the WD user to choose to render data at the DRDs identified by the network (page 5, paragraph 49, line 16-19; page 5, paragraph 48, line 37-40).

As of claim 23, Ortiz shows all elements of the parent claim and further shows the step of carrying out selection between devices found to be available via a user interface comprising a function that allows the WD user to choose to render data at the DRDs identified by the network (page 5, paragraph 49, line 16-19; page 5, paragraph 48, line 37-40), which inherently has to be performed on an user interface in one form or another in order for the user to decide which DRDs to direct the data to.

As of claim 24, Ortiz shows all elements of the parent claim and further shows the step of carrying out selection between devices found to be available, based on a predetermined user profile (abstract, line 12-14).

As of claim 25, Ortiz shows all elements of the parent claim and further shows that the profile is obtained on a device memory (Fig. 3, item 36).

Claim 1, 8-10, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fano (US 2002/0133545).

As of claim 1, Fano shows an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom comprising the function of pointing a Mobile Valet device at objects with ID tags and receive supporting services (page 2, paragraph 30, line 9-11) wherein the object with the tags is the announcer that could provide service, which could include routing product information to the Mobile Valet device (page 3, paragraph 39, line 14-16).

Fano also shows a scouting device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto comprising the Mobile Valet device that can sense objects with ID tags and receive supporting services (page 2, paragraph 30, line 6-11).

As of claim 8, Fano shows all elements in the parent claim and further shows that the announcer includes a passive device, carrying at least device identification information for reading by an active scout device comprising the bar code tag on a printer (page 3, paragraph 39, line 14-16).

As of claim 9, Fano shows all elements in the parent claim and further shows that the passive device further carries status information of said device comprising the product identifier linked to an online service such as the product reviews (page 3, paragraph 39, line 14-19), which is a status of the product.

As of claim 10, Fano shows all elements in the parent claim and further shows that the announcer comprises a barcode and wherein said scout is a barcode reader comprising the unique product identifier that could be a barcode (page 3, paragraph 39, line 14-19), and the mobile device, or the Mobile Valet device, that has sensing capability of barcodes (page 2, paragraph 30, line 6-9).

As of claim 12, Fano shows all elements in the parent claim and further shows a control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data comprising requesting for and receiving online services with the Mobile Valet device

(page 3, paragraph 39, line 14-19) where the online service is inherently provided by the online service provider.

As of claim 14, Fano shows all elements in the parent claim and further shows that data is an incoming multimedia communication comprising the Mobile Valet device transmitting sounds to a speaker (page 11, paragraph 101, line 12-17). Fano also shows that the Mobile Valet device could be a mobile telephone (page 8, paragraph 82, line 1-8). Thus, it inherently shows that the multimedia communication can be received from a cellular communication network since the Mobile Valet device is a mobile telephone.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499) in view of Sahai (US 6,594,699).

As of claim 3, Ortiz shows all elements in the parent claim. Ortiz does not show that the device is operable to determine media type requirements of said compatible equipment and include a media transformer for transforming media into a form that accords with said determined media type requirement.

However, Sahai shows a method of reformatting a multimedia message for delivery to a terminal according to the capability and user preferences (column 4, line 9-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ortiz's invention to include this multimedia formatting capability in order to allow media data to be distributed to and used by a greater variety of surrounding devices more effectively.

As of claim 4, Ortiz in view of Sahai as described shows all elements in the parent claim. Ortiz does not show a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

However, Sahai shows that delivery property that includes media formats could be chosen by the user through a conventional graphical user interface (column 4, line 12-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention to include a user interface in order to allow the user to have the control over what media type to be transmitted and played, thus providing the options for the users to personally choose the quality of the media based on the available resources that are available.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499) in view of Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

As of claim 6, Ortiz in view of Sahai as described shows all elements in the parent claim. However, Ortiz does not show a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations, and at least some of said multiple copies being redirected via said media transformer.

However, Gottlieb shows a module that detects any data with multiple destination and clone as necessary (column 14, line 41-46).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ortiz's invention to include a media cloner for making multiple copies of incoming data in order to allow a single data to be delivered to multiple destinations, thereby providing more enhanced services to the users.

In addition, it is noted that the media formatting is always performed prior to sending the data in Sahai's invention (shown as a single step 36 in the flow chart in Fig. 2). Thus, all copies of the outgoing data would be redirected via said media transformer.

Claim 5, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499) in view of Gottlieb (US 5,854,834).

As of claim 5, Ortiz shows all elements described in the parent claim. Ortiz does not show a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

However, Gottlieb shows a module that detects any data with multiple destination and clone as necessary (column 14, line 41-46).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ortiz's invention to include a media cloner for making multiple copies of incoming data in order to allow a single data to be delivered to multiple destinations, thereby providing more enhanced services to the users.

As of claim 17, Ortiz shows all elements in the parent claim.

Ortiz does not show that the data is multidirectional.

However, Gottlieb shows a module that detects any data with multiple destination and clone as necessary (column 14, line 41-46).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ortiz's invention to include a media cloner for making multiple copies of incoming data in order to allow a single data to be delivered to multiple terminals, thereby providing more enhanced services to the users.

As of claim 26, Ortiz shows all elements of the parent claim and the step of selecting a plurality of devices to reroute data thereto comprising the function that

allows the WD user to choose to render data at the DRDs identified by the network (page 5, paragraph 49, line 16-19; page 5, paragraph 48, line 37-40).

Ortiz does not show the step of cloning said communication for each selected device.

However, Gottlieb shows a module that detects any data with multiple destination and clone as necessary (column 14, line 41-46).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ortiz's invention to include a media cloner for making multiple copies of incoming data in order to allow a single data to be delivered to multiple destinations, thereby providing more enhanced services to the users

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gottlieb (US 5,854,834) in view of Sahai (US 6,594,699).

Regarding claim 19, Gottlieb shows a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices comprising a module that detects any data with multiple destination and clone as necessary (column 14, line 41-46).

Gottlieb does not show a transformer, associated with the cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

However, Sahai shows a function of reformatting a multimedia message for delivery to a terminal according to the capability and user preferences (column 4, line 9-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gottlieb's invention to associate this multimedia formatting capability to the cloner in order to allow media data to be distributed to different type of devices, thereby improving the service to the user.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499) in view of Kawamoto (US 2004/0080779).

As of claim 21, Ortiz shows all elements of the parent claim. Ortiz does not show the step of determining compatibility of said available devices in said vicinity with said data.

However, Kawamoto shows the step of determining the compatibility of a printer's driver with the incoming data (page 8, paragraph 112, line 1-3; Fig. 11).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the compatibility check in Ortiz's invention in order to prevent transferring data to a non-compatible device.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499) in view of Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

As of claim 22; Ortiz in view of Kawamoto shows all elements in the parent claim. Ortiz does not show the step of carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

However, Sahai shows a method of reformatting a multimedia message for delivery to a terminal according to the capability and user preferences (column 4, line 9-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Ortiz's invention to include this multimedia formatting capability in order to allow media data to be distributed to and used by a greater variety of surrounding devices more effectively.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ortiz (US 2002/0058499).

As of claim 27, Ortiz shows all elements of the parent claim and further shows the step of determining availability of other devices in the vicinity of said target device comprising WD locating available DRDs based on a DRD's proximity to the WD's location (page 5, paragraph 49, line 8-12). Since the DRD is within the vicinity of the WD, other available DRDs within the vicinity of the target DRDs would also be determined.

Ortiz does not show the step of rerouting said communication to at least one further target device selected from devices found to be available.

However, it is obvious to one of ordinary skill in the art that the WD described in Ortiz's invention is also capable of acting as a DRD. Therefore, it would also be obvious to reroute data from a first WD to a second WD, then reroute the data from the second WD to ensure that the communication terminates at an available and compatible device thereby improving the quality of the service.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meade (US 2003/0073412) recites a system using a mobile computing device to control appliances in the vicinity.

Fenton (US 2003/0172121) recites a system that allows multimedia messages to be reformatted and then provided to incompatible terminals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ju-Tai Kao whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571)272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

BENNY TIEU
PRIMARY EXAMINER
1/25/07

Notice of References Cited	Application/Control No. 10/347,388	Applicant(s)/Patent Under Reexamination SHMUELI ET AL.	
	Examiner Ju-Tai Kao	Art Unit 2609	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2004/0080779	04-2004	Kawamoto, Hirokazu	358/001.14
*	B	US-5,854,834	12-1998	Gottlieb et al.	379/114.04
*	C	US-2002/0058499	05-2002	Ortiz, Luis M.	455/412
*	D	US-2003/0073412	04-2003	Meade, William K. II	455/70
*	E	US-2002/0133545	09-2002	Fano et al.	709/203
*	F	US-2003/0172121	09-2003	Evans et al.	709/206
*	G	US-6,594,699	07-2003	Sahai et al.	709/228
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination
	10/347,388	SHMUELI ET AL.
	Examiner	Art Unit
	Ju-Tai Kao	2609

SEARCHED			
Class	Subclass	Date	Examiner

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
EAST search, see attached search history	1/18/2007	JK
Consulted with examiner Benny Tieu for searching strategy	1/18/2007	JK

OIPE IAP95
OCT 31 2007
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of.:		§		
		§		
	Oded SHMUELI et al	§		
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2616
		§		
For:	Routing of Data Including Multimedia Between Electronic Devices	§		
		§	Attorney Docket:	**25068**
		§		
Examiner:	Jutai Kao	§		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Sir:

This is in response to the United States Patent and Trademark Office Action mailed July 5, 2007, which response is being made on or before November 5, 2007, and for which a one month extension of time fee is due and enclosed herewith.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on page 2.

Remarks begin on page 7.

Please amend the above-identified application as follows:

In the Claims:

1.(Currently Amended) Data rerouting apparatus for association with first electronic equipment for rerouting communication data, comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available ~~for~~ to receive rerouting, thereby to enable receipt of rerouted data ~~therefrom~~ from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to ~~find out about~~ identify and determine availability of compatible equipment in the vicinity, thereby to reroute data ~~thereto~~ to one of said surrounding equipment, and wherein said rerouting comprises setting up a bidirectional communication link.

2.(Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Original) Apparatus according to claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15.(Currently Amended) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

~~Apparatus according to claim 1, wherein said data originates at the device embedding the apparatus.~~

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17.(Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19.(Currently Amended) Data rerouting ~~apparatus for association with electronic equipment for rerouting data to at least one selected target device~~ according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20.(Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first device,

scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device,

through said scanning device determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said first device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-27 are in this Application. Claims 1-27 have been rejected. Claims 1, 15, 19 and 20 have been amended herewith.

Claim Objections

Claim 15 is objected to as representing an improper division between claims. As a consequence, the last two lines of claim 15 are deleted.

35 U.S.C. § 102 and 103 Rejections

The Examiner has rejected Claims 1, 2, 7, 11, 13, 15, 16, 18, 20 and 23 - 25 under 35 U.S.C. 102(e), as being anticipated by Ortiz. (US 20020058499).

The independent claims have been amended to overcome the anticipation of Ortiz as follows:

Ortiz teaches brokering of data between data receiving devices and data rendering devices. Forwarding is carried out through the local network – see paragraph 49 line 4, which relates to having a DRD's details registered at network resources 28. Thus the passage referred to by the Examiner in paragraph 49 lines 8 – 11 refers not to scanning associated with the electronic device but rather to the network knowing where the device is and comparing that information with stored information in its database as to what are the nearby rendering devices.

As the Examiner accepts – see rejection of claim 17- Ortiz does not teach bidirectional redirection. That is to say Ortiz does not teach that redirection is of a bidirectional communication enabling users to take part in communication at the redirection device. Rather the redirection is one way, providing mere rendering facilities at the redirection device.

Ortiz teaches brokering between the devices regarding data transmission. In contrast with scouting, Ortiz explicitly mentions that brokering can be directly between devices – see Ortiz column 4 first few lines. Brokering according to Ortiz

however merely means finding suitable protocols and formats, see column 4 line 5, where Ortiz clearly states that the brokering he carries out concerns "the use of known networking and data formatting protocols". This appears to mean that the devices negotiate a suitable common data format and protocol. It certainly does not say that individual devices announce to the surroundings whether they are available or not, as per newly clarified claim 1. In general, rendering devices such as printers do not have to be momentarily available since they can rely on buffering, print queues etc, so there is no reason to believe that Ortiz meant anything else than that stated above.

Claim 1 has been amended to clarify that the announcer states whether the first device is available for receipt of the communication data.

Claim 1 has further been amended to clarify that the scouting device is associated with the first electronic device, as opposed to being part of remotely located network resources, and that the scanning device scans the vicinity, in contrast to Ortiz who merely checks in his database.

Claim 1 has further been amended to state that a bidirectional communication link is provided for the rerouting.

It is thus believed that claim 1 is novel and inventive over Ortiz. None of these three differences are in any way hinted at in Ortiz, since rendering devices do not need a reverse communication channel, and do not need to announce that they are available since they buffer under operating system or printer-local control. Furthermore there is no indication in Ortiz that there is any need to associate scanning with the first – that is, the redirecting – device.

Although Gottlieb is cited on the multi-directional feature, it merely teaches forwarding data to multiple destinations. There is no teaching in Gottlieb, however it could be combined with Ortiz that data should be rerouted to a selected new destination via a bidirectional link to enable communication from the new destination.

Claim 19 has been amended to depend from claim 1. Claim 20 has been amended to accord with the changes made to claim 1.

The independent claims are thus believed to be new and inventive in light of the cited prior art. The remaining claims are believed to be allowable as being dependent on an allowable main claim.

In view of the above amendments and remarks it is respectfully submitted that claims 1-29 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

Martin D. Moynihan

Martin D. Moynihan
Registration No. 40,338

Date: October 30, 2007

OIPE IAP95 OCT 31 2007 PATENT & TRADEMARK OFFICE

TWRC2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§	
		§	
	Oded SHMUELI et al	§	
		§	
Serial No.:	10/347,388	§	
		§	
Filed:	January 21, 2003	§	Group Art Unit: 2616
		§	
For:	Routing of Data Including Multimedia Between Electronic Devices	§	
		§	Attorney Docket: **25068**
		§	
Examiner:	Jutai Kao	§	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION AND FEE FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Sir:

(1) This is a petition for an extension of time to respond to the Office Action mailed July 5, 2007, for a period of one (1) month.

(2) Applicant is a:
_X_ small entity ___ verified statement attached
___ verified statement filed

(3) Extensions (months)	Fees for small entity	Fee for other than small entity
☑ **one month**	**$ 60.00**	$ 120.00
☐ two months	$ 230.00	$ 460.00
☐ three months	$ 525.00	$ 1050.00
☐ four months	$ 820.00	$ 1640.00
☐ five months	$1115.00	$ 2230.00

(4) An amendment _X_ is filed herewith
___ has been filed

(5) Please charge the extension fee and any other amount required to Deposit Account No. **50-1407**. A duplicate copy of this form is enclosed.

11/01/2007 SSITHIB1 00000048 501407 10347388
01 FC:2251 60.00 DA

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: October 30, 2007

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

7590 12/28/2007

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EXAMINER	
KAO, JUTAI	
ART UNIT	PAPER NUMBER
2616	
MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	Ju-Tai Kao	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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Apple EX1002 Page 69

DETAILED ACTION

Response to Amendment

Amendments filed on 10/31/2007 changes the scopes of the original claims. Therefore, new grounds of rejections are applied to the amended claims and the action is made final.

Specification

The disclosure is objected to because of the following informalities: typographical error.

On page 9 of the specification, "multi-media transmitter" on line 21 should be numbered "22" instead of "26" according to Fig. 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1-2, 7-11, 12-16, 18, 20 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499).

Fano discloses a Mobile Valet system including the following features.

Regarding claim 1, data rerouting apparatus for associating with first electronic equipment (see device 20 shown in Fig. 1) for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see "a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device" recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and

generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see "the user uses the Mobile Valet to redirect the information to a more suitable service channel or display..." recited in paragraph [0040]), and said rerouting comprises setting up a bidirectional (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Regarding claim 7, wherein said announcer is an active device, operable to transmit at least status information to respective surrounding (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082], that is, a status of waiting for requested information).

Regarding claim 8, wherein said announcer comprises a passive device, carrying at least device identification information (barcode 84 in Fig. 1) for reading by an active scout device (see sensing device 82 in Fig. 1).

Regarding claim 9, wherein said passive device further carries status information of said device (see "bar code tag...used to request...product reviews..." recited in paragraph [0039], wherein product review is considered a status of the product).

Regarding claim 10, wherein said announcer comprises a barcode (see barcode 84 in Fig. 1) and wherein said scout is a barcode reader (sensing capabilities, including...barcodes" recited in paragraph [0030]).

Regarding claim 12, the apparatus further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data (see "The user continues using his mobile device as an input device to provide input to the remote service provider...The local service provider transmits instructions to another mobile device carried by a staff member of the local service provider..." recited in paragraph [0061], that is the server being the communication service provider which performs the rerouting of data to the mobile device of the staff member).

Regarding claim 20, a method of rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]) comprising: receiving said data at a first device (see "sends back information signal 94, which is then received by the communications device 74..." recited in paragraph [0082]), scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), and rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]), said rerouting comprising setting up a bidirectional data link between said first device and

said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Fano does not disclose the following features, regarding claim 1, scout device also determine the availability of the compatible equipment; regarding claim 2, a user interface associated with said device for allowing a user to select between available compatible equipment to reroute data thereto; regarding claim 11, an outgoing multimedia transmitter for locally directing rerouted media to a selected device; regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure; regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network; regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network; regarding claim 16, wherein said data is unidirectional; regarding claim 18, a device database for storing compatibility data of different equipment type; regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device; regarding claim 23, carrying out selection between devices found to be available, via a user interface; regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile; regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claim 1, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 2, a user interface (see "user interface" recited in paragraph [0048]) associated with said device for allowing a user to select between available compatible equipment to reroute data thereto (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 11, the apparatus further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device (see "the WD providing data directly to a DRD via IR or RF communication" recited in paragraph [0056], wherein the data refers to "multimedia data" as shown in paragraph [0004]).

Regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure (see "DRDs can receive data directly from WDS and/or through networks (e.g., wireless, Internet, intranet, etc." recited in paragraph [0046]).

Regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network (see "voice and video services over cellular networks" recited in paragraph [0006]).

Regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network (see "voice and video services over cellular networks" recited in paragraph [0006]).

Regarding claim 16, wherein said data is unidirectional (see "a WD is providing data directly to a DRD" recited in paragraph [0059]).

Regarding claim 18, the apparatus further comprising a device database for storing compatibility data of different equipment type (see "The WD can be programmed/provided with unique control functions and/or signals applicable to a particular DRD" recited in paragraph [0050]).

Regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 23, carrying out selection between devices found to be available, via a user interface (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be idenfied by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile (see "DRD 7 selection can be based on WD 6 location and/or user profile information" recited in the abstract).

Regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings (see Fig. 3 memory 36, which includes the user profile).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano using features, as taught by Ortiz, in order to redirect the data to a more suitable service channel.

4. Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) as applied to claim 1 above, and further in view of Sahai (US 6,594,699).

Fano and Ortiz disclose the claimed limitations.

Fano and Ortiz do not disclose the following features: regarding claim 3, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a

user to select one of said media type requirements for transforming at said media transformer.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 3, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai "Media formats supported by the client which can be used for choosing and delivering the correct data format..." recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer (see "Typical delivery properties chosen by the user, through a conventional graphical user

interface...can include parameters such as...Media formats preferred to be used..." recited in column 4, line 11-27).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano and Ortiz using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

5. Claim 5, 17 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) as applied to claim 1 and 20 above, and further in view of Gottlieb (US 5,854,834).

Fano and Ortiz disclose the claimed limitations.

Ortiz also shows the following feature: regarding claim 27, determining availability of other devices in the vicinity of said target device (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be idenfied by the network 28 for selection by the WD user" recited in paragraph [0049]).

Fano and Ortiz do not disclose the following features: regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations; regarding claim 17, wherein said data is multidirectional; regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device; regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 17, wherein said data is multidirectional (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46, that is, can reroute the data to more than one target device, or a further target device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano and Ortiz using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) and Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz and Sahai disclose the claimed limitations.

Fano, Ortiz and Sahai do not disclose the following features: regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Sahai using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) as applied to claim 1 above, and further in view of Gottlieb (US 5,854,834) and Sahai (US 6,594,699).

Fano and Ortiz disclose the claimed limitations.

Fano and Ortiz do not disclose the following features: regarding claim 19, the apparatus further comprising a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single data to a plurality of respective target devices; and a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 19, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 19, a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device (see "the server 10 performs: asset selection and media data adaptation"

recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano and Ortiz using features, as taught by Gottlieb and Sahai, in order to allow data to be rerouted to multiple destination devices.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) as applied to claim 20 above, and further in view of Kawamoto (US 2004/0080779).

Fano and Ortiz disclose the claimed limitations.

Fano and Ortiz do not disclose the following features: regarding claim 21, determining compatibility of said available devices in said vicinity with said data.

Kawamoto discloses a print control method including the following features.

Regarding claim 21, determining compatibility of said available devices in said vicinity with said data (see "determined in step (11) that there is the compatibility" recited in paragraph [0111]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano and Ortiz using features, as taught by Kawamoto, in order to determine the supported data formats.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (2002/0058499) and Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz and Kawamoto disclose the claimed limitations.

Fano, Ortiz and Kawamoto do not disclose the following features: regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Kawamoto using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ju-Tai Kao whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/347,388	SHMUELI ET AL.
Examiner	**Art Unit**
Ju-Tai Kao	2616

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date
Final	Original	12/18/07
	1	√
	2	√
	3	√
	4	√
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	9	√
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PTO/SB/30 (08-00)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995.
See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**10/347,388**
Filing Date	**January 21, 2003**
Examiner Name	**Jutai Kao**
First Named Inventor	**Oded SHMUELI**
Group Art Unit	**2616**
Attorney Docket Number	**25068**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA. See Changes to Application Examination and Provisional Application Practice*, Final Rule, 65 *Fed. Reg.* 50092 (Aug. 16, 2000); Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**
   a. ☐ Previously submitted
      i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____
      (Any unentered amendment(s) referred to above will be entered).
      ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   b. ☒ **Enclosed**
      i. ☒ Amendment/Reply
      ii. ☐ Affidavit(s)/Declaration(s)
      iii. ☐ Information Disclosure Statement (IDS)
      iv. ☒ Three (3) Month Extension fee
      v. ☐ Other

2. **Miscellaneous**
   a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for
      a period of ____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) **required**)
   b. ☐ Other _____

3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

For:	*Claims after Amendment*	*Highest Claims Previously Paid*	*SMALL ENTITY* RATE	FEE	OTHER THAN A SMALL ENTITY RATE	FEE
Request for Continued Examination (RCE)			1	$ 405		
Multiple Dependent Claims			0 x $ 185	$ 0		
Total Claims*	36	27	9 x $ 25	$ 225		
Independent Claims*	3	3	0 x $105	$ 0		
* (If the difference in Column 1 is less than "0", enter "0" in Column 2)			*TOTAL*	$630	*TOTAL*	

☒ **The Commissioner is hereby authorized to charge $630.00- filing fees to Deposit Account No. 50-1407. In the event additional fees are required, please charge these additional fees to Deposit Account No. 50-1407. In the event of overpayment, please credit Deposit Account No. 50-1407.**

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Martin D. Moynihan	*Registration No. (Attorney/Agent*	40,338
Signature	Martin D. Moynihan	*Date*	**June 24, 2008**

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PTO/SB/30 (08-00)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**10/347,388**
Filing Date	**January 21, 2003**
Examiner Name	**Jutai Kao**
First Named Inventor	**Oded SHMUELI**
Group Art Unit	**2616**
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      ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   b. ☒ **Enclosed**
      i. ☒ Amendment/Reply
      ii. ☐ Affidavit(s)/Declaration(s)
      iii. ☐ Information Disclosure Statement (IDS)
      iv. ☒ Three (3) Month Extension fee
      v. ☐ Other

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   a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for
      a period of ____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) required)
   b. ☐ Other _____

3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

For:	*Claims after Amendment*	*Highest Claims Previously Paid*	*SMALL ENTITY* RATE	FEE	OTHER THAN A SMALL ENTITY RATE	FEE
Request for Continued Examination (RCE)			1	$ 405		
Multiple Dependent Claims			0 x $ 185	$ 0		
Total Claims*	36	27	9 x $ 25	$ 225		
Independent Claims*	3	3	0 x $105	$ 0		
* (If the difference in Column 1 is less than "0", enter "0" in Column 2)			*TOTAL*	$630	*TOTAL*	

☒ **The Commissioner is hereby authorized to charge $630.00- filing fees to Deposit Account No. 50-1407. In the event additional fees are required, please charge these additional fees to Deposit Account No. 50-1407. In the event of overpayment, please credit Deposit Account No. 50-1407.**

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Martin D. Moynihan	*Registration No. (Attorney/Agent)*	40,338
Signature	Martin D. Moynihan	*Date*	June 24, 2008

06/27/2008 SZEWDIE1 00000009 10347388
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of.:			
	Oded SHMUELI et al		
Serial No.:	10/347,388		
Filed:	January 21, 2003	Group Art Unit:	2616
For:	Routing of data including multimedia between electronic devices	Attorney Docket:	**25068**
Examiner:	Jutai Kao		

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed December 28, 2007, which response is being made on or before June 28, 2008, and for which a three month extension of time fee is due and enclosed herewith.

Applicant submits this response for entry into the record, in which:

Amendments to the Specification begin on page 2.

Amendments to the Claims begin on page 3.

Remarks begin on page 9.

Please amend the above-identified application as follows:

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Final Office Action Mailing Date: December 28, 2007

Examiner: Jutai Kao
Group Art Unit: 2616
Attorney Docket: 25068

In the Specification:

Please amend the third full paragraph of Page 9 as follows:

Media cloner 26 is responsible for duplication of its input channel content, preferably received from the incoming multi-media receiver 20 (input media) into as many output channels as indicated to it externally. Each output stream, or file, is routed, as indicated to it externally, to either the media transformer 24 or the outgoing multi-media transmitter 22 ~~26~~.

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Final Office Action Mailing Date: December 28, 2007

Examiner: Jutai Kao
Group Art Unit: 2616
Attorney Docket: 25068

In the Claims:

1. (Currently amended) ~~Data rerouting a~~Apparatus ~~for association with first electronic equipment~~ for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment, ~~and~~ wherein said rerouting comprises setting up a bidirectional communication link, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2.(Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Currently Amended) Apparatus according to claim 1, ~~wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus~~ further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface

for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17. (Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Currently amended) ~~Data rerouting~~Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (New) A cellular telephone comprising the apparatus of claim 1.

29. (New) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (New) The method of claim 20 wherein said data comprises video media.

31. (New) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (New) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (New) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (New) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (New) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and media type of said communication data.

36. (New) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Final Office Action Mailing Date: December 28, 2007

Examiner: Jutai Kao
Group Art Unit: 2616
Attorney Docket: 25068

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-27 are in this Application.

Claims 1-27 have been rejected.

The specification has been objected to.

The specification has been amended to correct an error in reference which caused the Examiner's objection to the specification.

Claims 1, 3, 19 and 20 have been amended herewith.

New claims 28-36 have been added.

The Examiner has rejected Claims 1-2, 7-11, 12-26, 18, 20, and 23-25 under 35 U.S.C. 103(a), as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (US 2002/0058499).

Claim 1 has been amended to further define the apparatus as mobile apparatus, and to include some of the limitation of original claim 3: "wherein said scout device is operable to determine media type requirements of said compatible equipment."

Applicants now believe that claim 1 is not obvious over Fano and Ortiz. Applicants also believe that there would have been no reason for a person ordinarily skilled in the art to combine Fano and Ortiz with Sahai (US 6,594,699), which was cited against the limitations of claim 3.

As the Examiner states on page 6 of the Office Action, Fano does not disclose "scout device also determine the availability of the compatible equipment".

The Examiner states, on page 7 of the Office Action, that Ortiz discloses a system for brokering data between wireless devices and data rendering services, and that regarding claim 1, "scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 "Is DRD available?"". Applicants respectfully point out that the Examiner appears to have made a typo, and appears to have meant "block 122 in Fig. 12".

Applicants believe that Ortiz does not disclose "scout device also determine the availability of the compatible equipment". Applicants point out that with reference to Fig. 12, Ortiz merely states: "The DRD will verify its availability and either approve or deny delivery 122". Ortiz does not anywhere teach availability based on media type requirements. Where Ortiz teaches availability, the following (paragraph 0021 of Ortiz) is taught: "allows the network to verify DRD availability (e.g., operational readiness)."

In fact, by disregarding media type compatibility as a factor of availability, Ortiz, which teaches the subject of availability, demonstrates that media type compatibility is not obvious.

Applicants now address the question whether there would have been reason for a person ordinarily skilled in the art to combine Fano and Ortiz with Sahai (US 6,594,699), which was cited against the limitations of claim 3.

Taking a problem-solution approach, Applicants submit that a person ordinarily skilled in the art, having the skill for producing a "mobile device communicates with local and remote service providers" (Fano) and a system for "data brokering between wireless devices (WDs) and Data Rendering Devices (DRDs)" (Ortiz), is still faced with a problem in order to produce the present invention. The problem is, at least, that the service providers, or the rendering devices (DRDs), can use communication data in a certain form, and require the mobile device to find out what that form is, and optionally transform the communication data to that form,

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
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Group Art Unit: 2616
Attorney Docket: 25068

before rerouting the data. In the present invention the finding out and the optional transform occur on an *ad-hoc basis*.

Neither Fano nor Ortiz have a "scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined *based*, at least partly, on *media type requirements* of said *compatible* equipment" (emphasis added).

As stated above, Fano and Ortiz do not teach, suggest, or provide motivation to apply the teaching of Sahai, (which teaches multimedia data streaming for a server processor coupled to a client processor over a packet-switched network), to "Apparatus for rerouting communication data, comprising: *mobile* electronic equipment", rerouting data for "*compatible equipment* in the vicinity" (emphasis added).

Furthermore, in Sahai, a server receives a request for multimedia over the packet switched network (a PULL operation by a request-initiating device, where said request-initiating device informs the server, among other data, what type of media it is requesting), while in the present invention "identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment", the mobile first electronic equipment performs a PUSH of the data to a surrounding equipment, after finding out that the surrounding equipment can either display the media or re-route the media. The first electronic device initiates the PUSH of the data with respect to the surrounding equipment.

Applicants respectfully submit that Sahai does not teach solving the problem remaining after combining the teachings of Fano and Ortiz.

It is thus believed that claim 1 is non-obvious over the prior art, including the teachings of Fano, Ortiz, and Sahai, and therefore deemed to be allowable.

Claim 3 has been amended to remove the limitation incorporated into amended claim 1.

Claim 19 has been amended to correct an error in antecedent basis.

Claims 2-19 depend from amended claim 1, and are therefore deemed allowable at least by virtue of their parent claim.

Claim 20 has been amended to accord with the change made to claim 1. Amended claim 20 is deemed allowable following the reasoning of amended claim 1.

Claims 21-27 depend from amended claim 20, and are therefore deemed allowable at least by virtue of their parent claim.

New claim 28 is to a cell phone comprising the apparatus of claim 1. Support for new claim 28 is found, *inter alia*, in Fig. 1 and the description thereof in paragraph 0050 of the published application, and in Fig. 2 and the description thereof in paragraph 0054 of the published application.

New claim 29 depends from claim 20, and adds a limitation that the data comprises a cellular telephone call. Support for new claim 28 is found, *inter alia*, in Figs. 1 and 2 and the descriptions thereof in paragraphs 0050 and 0054 of the published application, and in paragraphs 0091 and 0092 of the published application.

New claim 30 depends from claim 20, and adds a limitation that the data comprises video media. Support for new claim 28 is found, *inter alia*, in paragraphs 0094 and 0095 of the published application.

New claims 31-34 describe a distributed system comprising more than one apparatus according to claim 1, and as such, depend from amended claim 1. New

claims 31-34 add limitations supported by, *inter alia*, paragraph 0053 of the published application.

New claim 35 is similar to previously presented claim 20, with an addition of some of the limitation of original claim 3 as made in amended claim 1, and removal of limitations "receiving said data at a first mobile device" and "rerouting said data to at least one target device".

Claim 35 is supported similarly to previously presented claim 20, and as described above with reference to the amendment of claim 1.

Removal of the limitation "receiving said data ..." is supported by, *inter alia*: paragraph 0042 of the published application, which states that: "Such an initial recipient, *or originator*, is referred to hereinafter as the routing-source device" (emphasis added); paragraph 0048 of the published application, which states that: "Data may arrive from external sources via communication or generated by, or at, a device."; and paragraph 0054 of the published application, which states that: "A device not enabled for external communication may *not be able to receive originating communications from an external communication network* but may *be able to route data to other devices*" (emphasis added).

Applicants submit that removal of the limitation "rerouting said data ... " is logical because in a method which includes "scouting" and "routing", the "scouting" is done first. The "routing" may follow, but in some situations the routing may not follow. The "routing" has been removed from claim 35, and added as a new dependent claim 36.

Applicants submit that according to the argument made above with reference to claim 1, the limitation of "wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment" is not taught by any reference cited against the present application, and specifically not Fano, Ortiz, and Sahai. Therefore Applicants submit that new claim 35 is considered allowable.

New claim 36 depends from new claim 35, and adds the limitation: "routing said communication data to at least one target device ... ". The limitation is supported, *inter alia*, similarly to previously presented claim 20.

New claim 36 depends from claim 35, and is therefore deemed allowable at least by virtue of its parent claim.

In view of the above amendments and remarks it is respectfully submitted that claims 1-36 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: June 24, 2008

Encl.:
Request for Continued Examination (RCE)
Petition for Extension (3 Month)

OIPE
JUN 26 2008
PATENT & TRADEMARK OFFICE

1 FW RCE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of.:		§		
		§		
	Oded SHMUELI et al	§		
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2616
		§		
For:	Routing of data including multimedia between electronic devices	§		
		§	Attorney	
		§	Docket:	**25068**
Examiner:	Jutai Kao	§		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION AND FEE FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Sir:

(1) This is a petition for an extension of time to respond to the Final Office Action mailed December 28, 2007, for a period of THREE (3) months.

(2) Applicant is a:
_X_ small entity ___ verified statement attached
___ verified statement filed

(3)

Extensions (months)	Fees for small entity	Fee for other than small entity
☐ one month	$ 60.00	$ 120.00
☐ two months	$ 230.00	$ 460.00
☑ **three months**	**$ 525.00**	$ 1050.00
☐ four months	$ 820.00	$ 1640.00
☐ five months	$1115.00	$ 2230.00

(4) An amendment _X_ is filed herewith
___ has been filed

(5) Please charge the extension fee and any other amount required to Deposit Account No. **50-1407**. A duplicate copy of this form is enclosed.

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

06/27/2008 SZEWDIE1 00000084 501407 10347388
01 FC:2253 525.00 DA

~~06/27/2008 SZEWDIE1 00000009 501407 10347388~~
~~02 FC:2202 225.00 DA~~

Date: June 24, 2008

OIPE
JUN 26 2008
PATENT & TRADEMARK OFFICE
IAP58

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of.:		§		
		§		
	Oded SHMUELI et al	§		
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2616
		§		
For:	Routing of data including multimedia between electronic devices	§		
		§	Attorney	
		§	Docket:	**25068**
Examiner:	Jutai Kao	§		

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Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: June 24, 2008

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	06/26/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 36	Minus	** 27	= 9	X $25 =	225	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $105 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	225	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/STANLEY JORDAN/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IAP51

1K 2616

PTO/SB/122 (01-08)

CHANGE OF CORRESPONDENCE ADDRESS *Application*		
	Application Number	10/347,388
	Filing Date	January 21, 2003
	First Named Inventor	Oded Shmueli
	Art Unit	2616
Commissioner for Patents P.O.Box 1450 Alexandria, VA 22313-1450	Examiner Name	Jutai Kao
	Attorney Docket Number	25068

Please change the Correspondence Address for the above-identified patent application to the address associated with Customer Number:

67801

I am the Attorney or agent of record. Registration Number **40,338**.

Signature Martin O Moynihan	
Type or Printed Name Martin Moynihan	
Date: 7/3/08	Telephone: **(703) 598-7851**

JUL 17 2008 PATENT & TRADEMARK OFFICE
JUL 17 2008 PATENT & TRADEMARK OFFICE

PTO/SB/08a (08-03)
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	Oded SHMUELI et al
Art Unit	2616
Examiner Name	KAO, JUTAI
Attorney Docket Number	25068

Sheet	1	of	1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2002/0161862	31-Oct-2002	Horvitz	
	2	2006/0013254	19-Jan-2006	Shmueli et al.	
	3	5,913,038	15-Jun-1999	Griffiths	
	4	6,134,433	17-Oct-2000	Joong et al.	
	5	6,144,671	07-Nov-2000	Perinpanathan et al.	
	6	6,333,919	25-Dec-2001	Gaffney	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Documents Country Code[3]- Number[4]- Kind Code[5] (*if known*)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	7	GB 2370451	26-Jun-2002	Sydanmaa et al.		
	8	WO 01/41317	07-Jun-2001	Allaway et al.		
	9	WO 2004/012026	05-Feb-2004	Shmueli et al.		

Examiner Signature		Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

(12) UK Patent Application (19) GB (11) 2 370 451 (13) A

(43) Date of A Publication 26.06.2002

(21) Application No 0030968.2

(22) Date of Filing 19.12.2000

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(51) INT CL[7]
H04Q 7/38

(52) UK CL (Edition T)
H4L LDPD

(56) Documents Cited
GB 2353441 A
GB 2352126 A
GB 2304258 A
EP 0996272 A1

(58) Field of Search
UK CL (Edition S) H4L LDPD LRCMR LRCMX
INT CL[7] H04Q 7/32 7/38
ONLINE: WPI, EDOC, JAPIO

(54) Abstract Title
Diverting calls between different telephones

(57) A communication unit detects the presence in its vicinity of a second communication and determines its identity. If the identity is found to be of a predetermined set (e.g. of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

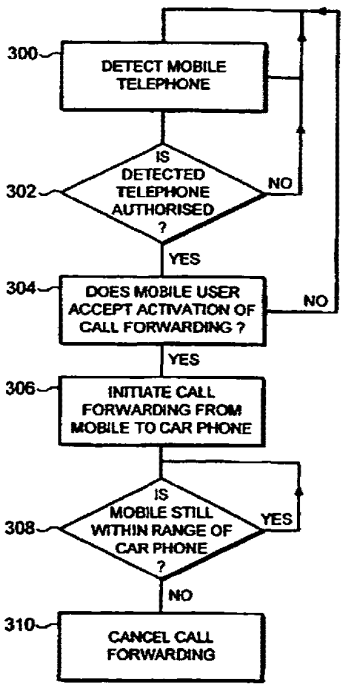


FIG. 3

GB 2 370 451 A

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

IPR2024-01050
Apple EX1002 Page 109

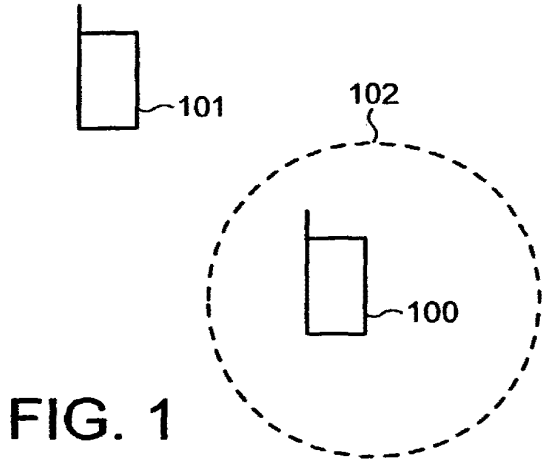

101
102
100

FIG. 1

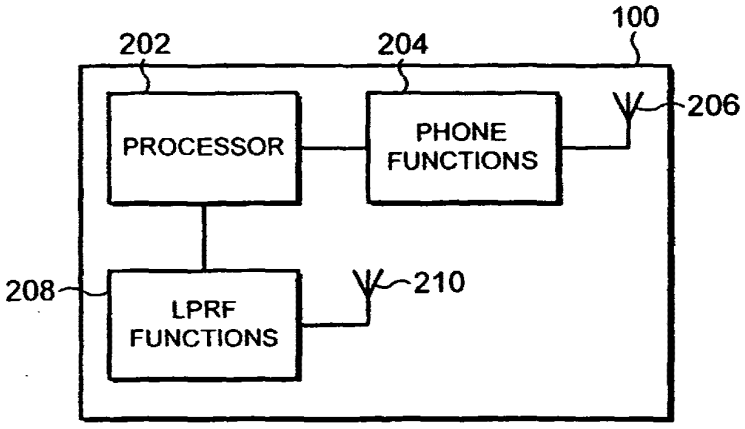

100
202
204
206
PROCESSOR
PHONE FUNCTIONS
208
210
LPRF FUNCTIONS

FIG. 2

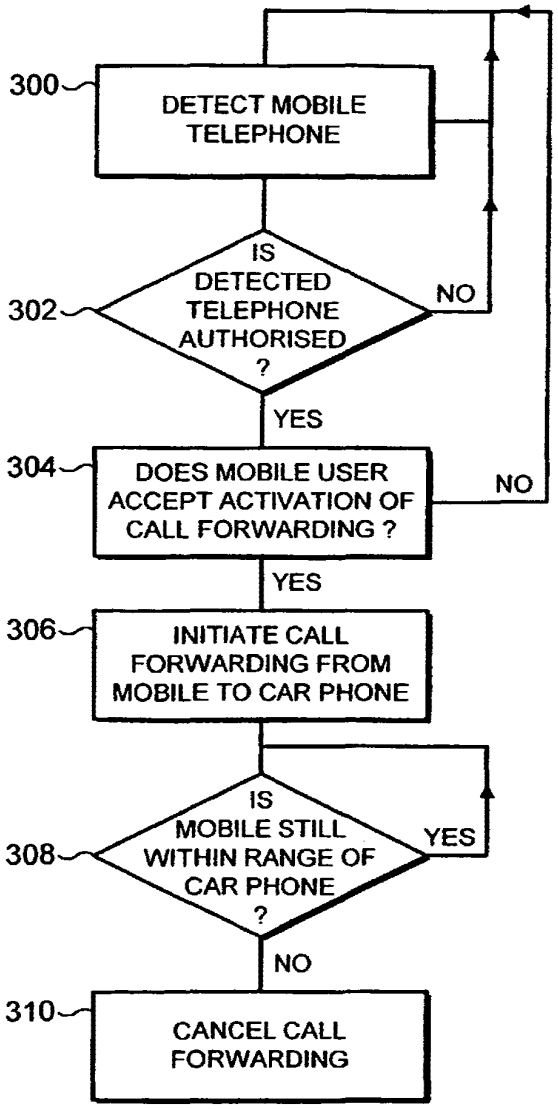

300
DETECT MOBILE TELEPHONE
302
IS DETECTED TELEPHONE AUTHORISED ?
NO
YES
304
DOES MOBILE USER ACCEPT ACTIVATION OF CALL FORWARDING ?
NO
YES
306
INITIATE CALL FORWARDING FROM MOBILE TO CAR PHONE
308
IS MOBILE STILL WITHIN RANGE OF CAR PHONE ?
YES
NO
310
CANCEL CALL FORWARDING

FIG. 3

PAT 00411 GB

MANAGING MULTIPLE RADIOTELPHONES

The present invention relates to radiotelephones and, more particularly, to the management of multiple radiotelephones.

In recent years, the penetration of handheld portable radiotelephones has grown enormously, and now, in many countries, the majority of people possess a portable radiotelephone. Of these people, an increasing number also posses more than one portable radiotelephone, for example a car phone and a handheld mobile radiotelephone. One problem with this is that a user ends up having multiple telephone numbers and people trying to contact the user do not know on which radiotelephone the user is may be contacted.

Accordingly, one aim of the present invention is to overcome the above-mentioned problems of the prior art.

According to a first aspect of the present invention, there is provided a communication device for communicating with a compatible communication device over a telecommunications network, wherein the communication devices have unique identities, the communication device comprising: a detector for detecting the presence of the compatible communication device; determination means for determining the identity of the detected compatible communication device; and a controller effective for redirecting incoming calls intended for the detected compatible communication device having the determined identity to the communication device.

According to a second aspect of the present invention, there is provided a method of redirecting calls to a communication device from a compatible communication device, wherein the communication device and the compatible communication device have unique identities and are capable of communicating over a telecommunications network, the method at the

communication device comprising: detecting the presence of the compatible communication device; determining the identity of the detected compatible communication device; and redirecting incoming calls intended for the compatible communication device having the determined identity to the communication device.

According to a third aspect of the present invention, there is provided a communications system having a first and a second communication device each having a unique identity and capable of being connected via a telecommunications network, wherein the first communication device comprises: a detector for detecting the presence of the second communication device; means for determining the identity of the second communication device; a controller effective for redirecting calls intended for the second communication device having the determined identity to the first communication device.

One advantage of the present invention is that a user is always contactable on whichever telephone they are currently using. This prevents people trying to contact the user from having to try multiple numbers in order to reach the user.

The present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 shows a first embodiment of the present invention according to the present invention;

Figure 2 is a block diagram showing the telephone 100 of Figure 1 in greater detail; and

Figure 3 is a flow diagram outlining the main steps of one embodiment according to the present invention.

Figure 1 shows a mobile phone 100, preferably mounted in a fixed location such as a car. The mobile phone, hereinafter referred to as car phone 100, has a detector (not shown) which can detect the presence of a compatible mobile telephone 101 within a range 102.

For the purposes of this description the term car phone will be used to describe a mobile telephone mounted in a car, and the term mobile telephone will be used to describe a hand-held mobile telephone.

If the user has both a car phone and a mobile telephone this can cause severe confusion for people trying to contact the user. For example, whilst driving the car the user may be unable, due to safety reasons or legislation, to use his mobile telephone. Additionally, whilst out of the car the user will not be able to answer the car phone. Someone trying to contact the user on his mobile telephone number whilst he is driving will therefore be unable to be connected, unless he redials using the number of the car phone. Someone trying to call the user will therefore will require both the number of the car phone and the mobile telephone and may have to try calling both numbers in order to reach the user, depending on whether the user is in or out of the car.

Each of the telephones 100 and 101 contain a subscriber identification module (SIM) which provide each of the telephones with a unique subscriber number (i.e. a telephone number). In this way, each of the telephones 100 and 101 may operate independently. However, as described above, this does present the user with a number of problems.

When the mobile telephone 101 is detected within the range 102 of the car phone 100, the car phone 100 can be programmed to perform a number of predetermined tasks. Such tasks may include initiating network based call forwarding from the mobile telephone to the car phone, determining the identity of the detected phone, authorising the detecting phone etc...

For example, when a user having a mobile telephone enters a car having a car phone, the car phone detects the presence of the mobile telephone and causes all subsequent phone calls to the mobile telephone to be diverted to the car phone. In this way, calls to the mobile telephone may be safely answered using the car phone. Typically a car phone is specially designed to be safely operated whilst driving and may include features such a separate loudspeaker and microphone, a separate display and a separate control panel. When the user leaves the car, the car phone no longer detects the presence of the mobile telephone and cancels the call forwarding. This arrangement enables the user to be always contactable on a single subscriber number, that of his mobile telephone.

In an embodiment having a car phone, it is preferable that the range in which a compatible telephone can be detected is limited so as not to extend beyond the perimeter of the car. This is to prevent unintentional detection of compatible telephones whilst outside of the car.

Figure 2 is a block diagram showing the telephone 100 of Figure 1 in greater detail.

The mobile telephone 100 of Figure 1 has a central processor 202 which is connected to a control module 204 which controls the expected functions of a mobile telephone, such as the key pad, call management, display, etc. These functions will not be described in detail as they are well understood in the art, and do not directly form part of the present invention. An antenna 206 is used to transmit signals to and to receive signals from a cellular or other wireless telecommunications network. Also connected to the processor 202 is a module 208 which controls the function of a local wireless connection, via an antenna 210. The module 208 may use low power radio frequency (LPRF) technology, such as the commonly called Bluetooth standard, to communicate to similarly equipped devices. Alternatively, the module 208 may use any other appropriate communication medium, for example, an infra-red link, or

even a direct electrical connection which may be provided through a mobile phone holder.

In LPRF communications it is common for one device to act as a master to other slave devices. In the present embodiment it is preferred that the car phone acts as the master device, and the mobile phone acts as the slave device, although the invention will work equally well with the reverse arrangement. The car phone transmits a signal over the LPRF network requesting other compatible devices to respond over the LPRF network. Since the car phone transmits these requests frequently this increases the power requirements of the car phone. It is for this reason that it is preferable that the car phone is chosen to be the master device, since the car phone will generally be connected to a large capacity car battery.

When a compatible device, such as the mobile phone 101 is within range of the master LPRF signal transmitted by the car phone, the request signal is received by the slave LPRF module of the mobile phone 101. The slave LPRF module of mobile phone 101 transmits a signal to the master LPRF module of the car phone 100 indicating that the mobile phone 101 is within range of the car phone 100. The precise details regarding handshaking between the master and slave devices will not be discussed in detail here since they will be apparent to those skilled in the art. However, an outline of the steps undertaken by a master LPRF device according to one embodiment of the present invention are shown in Figure 3.

The master LPRF module of the car phone 100 attempts to detect, at a step 300, the presence of a compatible mobile telephone 101 within transmission range of its signal. If no compatible mobile telephone is detected, the master LPRF module of the car phone 100 periodically transmits a request that any compatible device acknowledges with an appropriate response signal. Once a compatible device has been detected an authorisation step 302 is performed. The authorisation step 302 ensures that only authorised mobile telephones be

used with the car phone. The authorisation step 302 determines the identity of the detected device, for example by determining the subscriber number of the device. Authorisation consists of comparing the identity of the detected device with a list of previously authorised identities. If the identity of the detected device is among the list of previously authorised identities, authorisation may be given, otherwise authorisation may be refused. Additionally, authorisation may require, for example, the entering of a security code by the user, either on the mobile phone or on the car phone in order to complete the authorisation step.

The car phone may also be configured to allow any compatible device to be used, regardless of identity.

The car phone 100 may, optionally at step 304, request confirmation from the user of the mobile telephone to initiate call forwarding from the mobile telephone 101 to the car phone 100. If the mobile phone user does not accept call forwarding, the master LPRF device of the car phone 100 returns to execute step 300.

The authorisation step may also add to the list of authorised mobile telephones any mobile telephones which are successfully used with the car phone. In other words, once a mobile telephone has been authorised for use with the car phone once, it will always be authorised until it is removed from the authorisation list.

If the user accepts activation of call forwarding, the car phone 100 initiates call forwarding of the mobile phone 101 to the car phone 100 at a step 306. In an alternative embodiment the car phone 100 may instruct the mobile telephone 101 to initiate call forwarding from the mobile telephone 101 to the car phone 100. The call forwarding may be performed on the network, by sending appropriate control signals to the network such that calls made to a given subscriber number are automatically re-routes to a forwarded number.

Alternatively, call forwarding may be established by a mobile telephone handset itself. In this case, when a call arrives at a mobile telephone, the mobile telephone makes a new call to the forwarded number, and connects the calls together.

Once call forwarding is initiated, the master LPRF device of the car phone 100 periodically checks to see whether the mobile telephone 101 is still within range of the car phone. As soon as the mobile telephone 101 is no longer within range, for example when the user leaves the car with his mobile phone, call forwarding is automatically cancelled by the car phone 100. In an alternative embodiment the mobile telephone 101 acts to cancels the call forwarding when out of range of car phone 100. Preferably call forwarding is also cancelled whenever the LPRF link is broken, for example when the mobile telephone is switched off or when the battery of the mobile telephone runs out. It may be preferable in these instances to request confirmation from the user, via the car phone 100, as to whether call forwarding should be cancelled. If no response is received from the user within a given time period call forwarding may be cancelled automatically.

In yet a further embodiment of the present invention, the call forwarding performed by either the car phone 100 or the mobile phone 101 is user customisable. For example, there are many telephone companies which now provide so called personal or non-geographic telephone numbers. This allows a user to choose an easy to remember telephone number. Such telephone numbers are not associated with any particular telephone, but are forwarded to a predetermined telephone number. The call forwarding capability of the car phone or the mobile phone enables call forwarding of the personal number to which ever device is currently in use. For example, when a user enters the car, the car phone causes the personal number to be forwarded to the car phone. When the user leaves the car, the car phone causes the personal number to be forwarded to the mobile telephone.

In yet a further embodiment of the present invention, the mobile phone acts as the master LPRF device, and the car phone acts as the slave LPRF device.

It is common when using call forwarding that the telephone which is being forwarded is charged for the forwarded portion of the call. The telecommunications network operator, however, can arrange for these charges not to be incurred. The network operator can also arrange that calls made by the car phone, whilst having calls forwarded to it from a mobile telephone, show the caller line identification (CLI) of the forwarded mobile telephone. Additionally, the network operator can also arrange that calls made in this manner are billed to the forwarded telephone. In this way, calls made from the car phone will appear to be made by the mobile telephone which is forwarded thereto.

Although the present invention is described above with reference to a car phone and a mobile telephone, it will be appreciated that the car phone could be replaced by any other fixed or semi-permanent telephone having an LPRF module. For example, the present invention could also be used in an office or home environment. Additional embodiments provide that, for example in an office environment, when a user is at his desk, calls to a mobile telephone are forwarded to a desktop phone connected to a private switched telecommunications network (PSTN). When the user is away from his desk, this is automatically detected by the desktop phone (or the mobile telephone) and calls to the desktop phone may be automatically forwarded to the mobile telephone.

Those skilled in the art will appreciate that other combinations are also possible within the scope of the present invention. For example, the presence of the car phone could be detected by a mobile telephone, and the mobile telephone could effect the call forwarding in response to the detection.

Reference above to mobile telephone or car phone is also intended to include reference to radiotelephones and portable radiotelephones.

CLAIMS

1. A communication device for communicating with a compatible communication device over a telecommunications network, wherein the communication devices have unique identities, the communication device comprising:

a detector for detecting the presence of the compatible communication device;

determination means for determining the identity of the detected compatible communication device; and

a controller effective for redirecting incoming calls intended for the detected compatible communication device having the determined identity to the communication device.

2. The communication device of claim 1, wherein the detector establishes communication with the detected communication device over a local connection.

3. The communication device of claim 2, wherein the means for determining the identity determines the identity over the local connection.

4. The communication device of claim 1, 2 or 3, wherein the controller sends control signals to the telecommunications network such that the network can redirect the incoming calls.

5. The communication device of claim 1, 2 or 3, wherein the controller sends control signals to the compatible communication device such that the compatible communication device can redirect the incoming calls.

6. The communication device of any preceding claim, wherein the detector detects the presence of the compatible communication device substantially within a predetermined range.

7. The communication device of any preceding claim, further comprising authorising means for authorising the use of the compatible communication device with the communication device, and only effecting call redirection if authorisation is given.

8. The communication device of claim 7, wherein the authorising means contains a list of the identities of authorised compatible communication device, and wherein authorisation is given only if the determined identity of the detected compatible communication device matches one of the identities in the list of identities.

9. The communication device of claim 8, wherein the determined identity of any detected compatible communication device is added to the list identities of authorised compatible communication devices.

10. The communication device of claim 7, 8 or 9, wherein the means for authorising further comprises a memory for storing a list of passwords associated with each identity in the list of identities, and wherein authorisation is given only when a matching password is entered on the communication device.

11. The communication device of any of claims 2 to 10, wherein the local connection is a low power radio frequency connection.

12. The communication device of any preceding claim, wherein the detector comprises a low power radio frequency transceiver capable of transmitting signals to and for receiving signals from compatible low power radio frequency transceivers.

13. The communication device of any of claims 2 to 10, wherein the local connection is a fixed wire connection.

14. The communication device of any of claims 2 to 10, wherein the local connection is an optical connection.

15. The communication device of any preceding claim, wherein the controller is effective to cancel call redirection when the detector no longer detects the presence of the compatible communication device.

16. The communication device of any preceding claim, wherein the communication device is a telephone.

17. The communication device of any preceding claim, wherein the compatible communication device is a radiotelephone.

18. A method of redirecting calls to a communication device from a compatible communication device, wherein the communication device and the compatible communication device have unique identities and are capable of communicating over a telecommunications network, the method at the communication device comprising:

detecting the presence of the compatible communication device;

determining the identity of the detected compatible communication device; and

redirecting incoming calls intended for the compatible communication device having the determined identity to the communication device.

19. The method of claim 18, wherein the step of detecting comprises detecting the compatible communication device over a local connection.

20. The method of claim 18, wherein the step of determining the identity comprises determining the identity over the local connection.

21. The method of claim 18, 19 or 20, wherein the step of redirecting comprises sending control signals to the telecommunications network such that the network can redirect the incoming calls.

22. The method of claim 18, 19 or 20, wherein the step of redirecting comprises sending control signals to the compatible communication device such that the compatible communication device can redirect the incoming calls.

23. The method of any of claims 18 to 22, wherein the step of detecting detects the presence of the compatible communication device substantially within a predetermined range.

24. The method of any of claims 18 to 23, further comprising authorising the use of the compatible communication device with the communication device, and only effecting call redirection if authorisation is given.

25. The method of claim 24, wherein the step of authorising comprises comparing the identity of the detected compatible communication device with a list of identities of authorised compatible communication devices stored in the communication device, and only giving authorisation if a match occurs.

26. The method of claim 25, further comprising adding to the list of identities the identity of any detected compatible communication device for which authorisation is given.

27. The method of claims 24, 25 or 26, wherein the step of authorising further comprises comparing a password entered on the communication device with a list of passwords stored in the communication device in association with the list of identities, and wherein authorisation is given only when the entered

password and the stored password for the detected compatible communication device match.

28. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over a low power radio frequency connection.

29. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over a fixed wire connection.

30. The method of any of claims 19 to 27, wherein the step of detecting is adapted to detect over an optical connection.

31. The method of any of claims 19 to 30, further comprising cancelling the redirection of calls when the presence of the compatible communication device is no longer detected.

32. The method of any of claims 19 to 31, wherein the communication device is a telephone.

33. The method of any of claims 19 to 32, wherein the compatible communications device is a radiotelephone.

34. A communications system having a first and a second communication device each having a unique identity and capable of being connected via a telecommunications network, wherein the first communication device comprises:

a detector for detecting the presence of the second communication device;

means for determining the identity of the second communication device;

a controller effective for redirecting calls intended for the second communication device having the determined identity to the first communication device.

35. The communications system of claim 34, wherein the detector establishes communication with the detected second communication device over a local connection.

36. The communications system of claim 35, wherein the means for determining the identity determines the identity over the local connection.

37. The communications system of claim 34, 35 or 36, wherein the controller sends control signals to the telecommunications network such that the network can redirect the incoming calls.

38. The communications system of claim 34, 35 or 36, wherein the controller sends control signals to the second communication device such that the second communication device can redirect the incoming calls.

39. The communications system of any of claims 34 to 38, wherein the detector detects the presence of the second communication device substantially within a predetermined range.

40. The communications system of any of claims 34 to 39, the first communication device further comprising authorising means for authorising the use of the second communication device with the first communication device, and only effecting call redirection if authorisation is given.

41. The communications system of claim 40, wherein the authorising means contains a list of the identities of authorised communication devices, and

wherein authorisation is given only if the determined identity of the detected communication device matches one of the identities in the list of identities.

42. The communications system of claim 41, wherein the determined identity of any detected communication device is added to the list identities of authorised communication devices.

43. The communications system of claim 40, 41 or 42, wherein the means for authorising further comprises a memory for storing a list of passwords associated with each identity in the list of identities, and wherein authorisation is given only when a matching password is entered on the first communication device.

44. The communications system of any of claims 34 to 44, wherein the local connection is a low power radio frequency connection.

45. The communications system of any of claims 34 to 44, wherein the detector comprises a low power radio frequency transceiver capable of transmitting signals to and for receiving signals from compatible low power radio frequency transceivers.

46. The communications system of any of claims 35 to 43, wherein the local connection is a fixed wire connection.

47. The communications system of any of claims 35 to 43, wherein the local connection is an optical connection.

48. The communications system of any of claims 35 to 47, wherein the first communication device is a telephone.

49. The communication system of any of claims 35 to 48, wherein the second communication device is a radiotelephone.

50. A communication device substantially as hereinbefore described with reference to the accompanying drawings.

51. A method of redirecting calls to a communication device from a compatile communication device substantially as hereinbefore described with reference to the accompanying drawings.

52. A communications system substantially as hereinbefore described with reference to the accompanying drawings.

INVESTOR IN PEOPLE

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UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

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Int Cl (Ed.7): H04Q 7/32, 7/38

Other: Online: WPI, EDOC, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X, E	GB 2353441 A (SAGEM) See whole document	1, 18, 34 at least
X, E	GB 2352126 A (VTECH) ,, ,, ,,	,,
X	GB 2304258 A (NEC) ,, ,, ,,	;;
X, E	EP 0996272 A1 (SAGEM) ,, ,, ,,	,,

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
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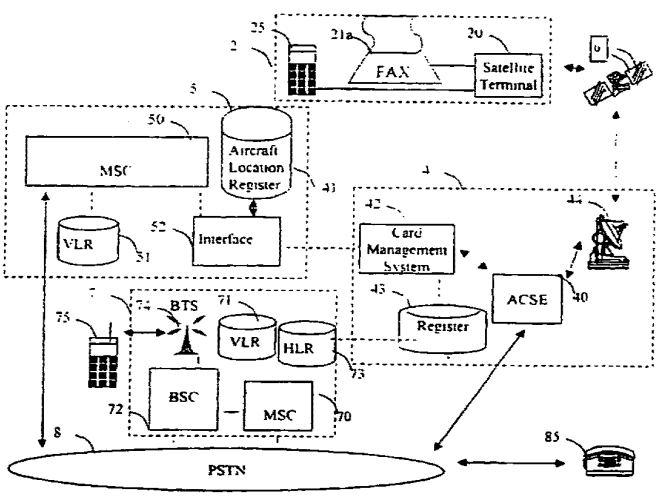
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[Continued on next page]

(54) Title: MOBILE TELEPHONY



(57) Abstract: An interface (52) is provided between a satellite telephone system (4) and a cellular telephone system (5) for allowing calls to a user's cellular telephone to be diverted to a satellite telephone handset (25) when the user is unable to use his cellular telephone, for example when on board an aircraft (2) fitted with a satellite telephone system (20). The user inserts a card (which may be the SIM of his mobile phone, or a card compatible with existing satellite telephone equipment) into a suitable reader in the satellite telephone (20), which causes the satellite ground station's card verification system (42) to connect to a host cellular network (50). The host cellular network has an interface unit (52) which emulates the operation of a normal base station, so that the host cellular system (50) acts as if the mobile user's terminal is roaming on the host network, but is currently "busy". The interface (52) also resets the user's existing call diversion instructions so that when the host cellular system (5) receives a busy tone from the base station emulator (52), it routes calls to the directory number of the terminal (20). Data messages originally formatted for transmission over the cellular telecommunications network for generation of a display on a display unit of a cellular telephone, can instead be transmitted over the satellite network for display on the information and entertainment system of the aircraft by replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message. A new data message is created, addressed to the server of the information display system and having the amended data message as payload. The onboard server has means for converting the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

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MOBILE TELEPHONY

This invention relates to mobile telephony, and in particular to systems for use on board vehicles.

There has been considerable activity in recent years in proposals to allow the use of mobile telephones in environments where conventional cellular telephony base stations cannot provide coverage, in particular on board ships and aircraft. These vehicles frequently travel beyond the range of land-based cellular base stations, which typically have a range of the order of 1 to 10km.

There are also circumstances when temporary provision of cellular telephone facilities is required at a remote location where such facilities are not normally available, or are temporarily unavailable, for example when the fixed infrastructure has been damaged by a natural disaster.

There are a number of special difficulties to be addressed if a standard cellular telephone is to be used in an aircraft. Firstly, many cellular base stations have antennas arranged for maximum gain in the horizontal plane, so an airborne cellular telephone may not be able to obtain a signal from any base station, even when flying over land served by a cellular base station network. If the range of the base stations does extend to the normal flying height of aircraft, frequency re-use patterns, which allow several base stations to use the same radio frequencies without interference, are designed on the assumption that a mobile unit served by one base station is not able to exchange radio signals with other base stations using the same frequency. This assumption ceases to be valid if a mobile unit is several thousand metres above the ground, since it may be in line-of-sight of a large number of base stations simultaneously. Moreover, although reliable handover of a mobile unit can be achieved from moving vehicles travelling at speeds of up to 200km/h, a typical passenger aircraft travels at speeds approaching 1000 km/h. Airlines also impose restrictions on the use of powerful radio signals on board, as a precaution against possible interference with the aircraft's electronic systems.

For truly global coverage, satellite telephones are available. However, these are expensive and much heavier than a cellular telephone. Both cellular telephones and satellite telephones also suffer from the screening effect of being inside a metal

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hulled vehicle. As with cellular telephones, the unrestricted use of a portable satellite telephone within an aircraft may be prohibited.

A user without his own satellite telephone may use special facilities provided on board, such as the service provided to several airlines by the applicant company under the Registered Trade Mark "Skyphone". This uses onboard terminals connected, through a satellite link between the aircraft and a satellite ground station, to the telephone network. Another system, TFTS (terrestrial flight telephony system, marketed as "Jetphone"), operates in a similar manner, but uses a direct link between the aircraft and the ground station, without a satellite link. Similar systems are provided on board ships. However payment for these services is generally at the point of use (or prepaid), and may be in a foreign currency. Calls made to the user's cellular telephone will not be successful unless the calls can be diverted to the telephone number of the onboard user terminal (which will generally not be known to the caller), and any special facilities offered by the user's cellular network will in general be unavailable. A user with his own cellular telephone account which, through "roaming" agreements between network operators, can be used in many different countries, would therefore prefer to continue to use his cellular telephone subscription when travelling within or between these countries on board an aircraft or other vehicle.

Proposals have been made, for example EP0915577 (Rohde & Schwartz) for a facility which would allow cellular telephones to make outgoing calls by way of the aircraft's own onboard telephone system. This allows the aircraft's onboard systems to impose power control on the mobile units and ensure that their radio transmissions are kept within safe limits. However, the cellular telephone is not directly connected to the cellular network, so conventional cellular radio location update processes cannot be used to inform the user's home network of its current location and allow incoming calls to be routed to the telephone.

Proposals have also been made to allow a user to use his own cellular radio identity when using the satellite facility, instead of a special identity under the satellite system. This would allow billing to be made through the user's normal cellular radio account, and would also allow incoming calls made to his cellular telephone number to be received whilst travelling. To this end, systems have been developed which allow call diversions to be set up to allow calls made to the user's

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cellular number to be transferred to a destination node of the tracking radio system. The destination node may be an onboard handset temporarily allocated the user's cellular identity, or it may be an onboard base station capable of wireless connection to the user's own cellular telephone. Systems of this general kind have been disclosed in International Patent Applications WO99/12227 (Nokia), WO94/28684 (Nordictel) and WO98/26521 (Ericsson); European Patent Applications 0920147 (Alcatel) and 0915577 (Rohde & Schwartz), and United Kingdom Patent Application 2310973 (Motorola). An onboard base station can be integrated with other onboard systems, allowing local control of the base station's transmitter, and those of the mobile units with which it is co-operating, so as to keep their power within permitted limits.

This is made possible by an invention disclosed in the International application filed on the same date as the present application, with applicant's reference A25823 and priority date 14th September 1999, which provides apparatus for enabling a termination point of a first telecommunications system to initiate call diversion instructions in the switching system of a second telecommunications system such that calls initially directed to a telephone apparatus usable with the second telecommunications system are diverted to the said termination point in the first telecommunications system, the apparatus comprising means in the first telecommunications system for identifying the telephone apparatus from which calls are to be diverted and the termination point to which calls are to be diverted, and an interface means between the first telecommunications system and the switching system of the second telecommunications system, the interface means comprising:

means to indicate to the switching system that the telephone apparatus is in a specified operating condition, irrespective of the true operating condition of the telephone apparatus,

and means to generate an instruction to the switching system to divert calls, intended for the telephone apparatus, to the said termination point of the first telecommunications system when the telephone apparatus is indicated as being in the said predetermined operating condition.

In the preferred arrangement the first and second telecommunications systems are a satellite telephone system and a cellular telephone system respectively, the

identification information being a user identity associated with the telephone apparatus, and the network address of the termination point.

Other aspects of the invention disclosed in the aforementioned International patent application provide the novel features of each of the individual telecommunications systems which co-operate to form the complete system, and methods of operation of these individual co-operating systems and of the complete process.

A second arrangement, disclosed in the applicant's International Patent Application having the same filing date as the present application and the applicant's case reference A25937, claiming the priority date 25th August 1999, has apparatus for providing telephone connection between one or more cellular radio telephones and a fixed cellular radio switching system, comprising a moveable cellular system on board a vehicle, a fixed cellular radio switching system, and a tracking radio link providing radio connection between the moveable cellular switching system and the fixed cellular switching system, the moveable cellular system comprising a moveable telephone switching system connected to one or more base transceiver stations for providing radio connection with the cellular radio telephones, and having means for initiating a control call over the tracking radio link to the fixed cellular radio switching system in response to the detection of the presence of a cellular radio telephone in the area of coverage of base transceiver stations, and the fixed cellular radio switching system having registration means responsive to such control calls to indicate to other switching systems that calls to a cellular radio telephone currently served by the moveable switching system should be initially directed to the fixed cellular radio switching system, the fixed cellular radio switching system also having call diversion means responsive to such control calls to allow incoming calls directed to the cellular radio telephone to be diverted to the moveable cellular switching system by way of the tracking radio link. In the embodiment described in that application, the movable system has means for generating an association between a destination node of the tracking radio link and an identity code of a cellular radio telephone, and means for storing the said associated identities in stores associated with the fixed and moveable cellular switching systems, thereby allowing both cellular radio switching systems to translate between the cellular radio identity and the node identity. The apparatus is arranged such that calls directed to a cellular

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telephone currently co-operating with the moveable switching cellular system are diverted by the fixed cellular switching system to a node of the tracking radio system having the identity associated with the cellular radio identity, the node having means for connecting the call to the moveable cellular switching system and the moveable switching system having means for retrieving the cellular network identity associated with the node and routing the call to the cellular telephone having that identity.

In the cellular telephone systems described in the aforementioned International Patent applications the interface units are arranged to appear to the switching system as a typical radio base station control system, to which the mobile handset is currently working, although in fact no radio base stations are actually controlled by it. This interface unit may therefore be considered to be a "Virtual" Base Site Controller. The switching system itself requires no modification: it merely registers that the user is working to the "Virtual" Base Site Controller and stores the user details in its "Visitor Location Register" (VLR), in the same way as it would for a mobile unit working to any real base site controller to which it is connected. The interface unit also generates a call diversion instruction, which will appear to the switching system to have come from the mobile handset, by way of the "Virtual" Base Site Controller. This call diversion instruction is set up in the switching system such that if the "Virtual" Base Site Controller responds to a call request directed to the mobile unit with a "busy line" response (or some other specified condition), calls are to be diverted, through normal network interconnects, to a specified directory number, namely that of the satellite termination point to which the user is connected. The interface unit does not in fact monitor the real condition of the user terminal, (which is not operatively connected to the interface unit), but instead always returns the "line busy" signal to the switching system.

The interface unit includes a store to record any diversion settings existing for the telephone apparatus prior to the diversion to the second network being set up. This allows these settings to be retrieved when the user disconnects from the first telecommunications system, so that they can be reinstated in the switching system of the second telecommunications system, or transferred to another telecommunications system, when the telephone apparatus makes contact with a real radio base station, thereby initiating a handover procedure from the "Virtual" Base Site Controller to the real one.

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Should a second call attempt to the user's cellular telephone be made whilst a call is in progress to the onboard system, the switching system may be arranged to divert it to another predetermined number, such as the user's "voicemail", or automatic answering service, address.

If the user termination is in an aircraft or other vehicle connected to a ground station (by satellite or otherwise), it may move from the area covered by one satellite (or ground station) to that of another. In that case, the network address of the termination changes. To accommodate this, the interface may be provided with means to store the address of termination points in the first system, means to record changes to the said addresses transmitted to it from the first system, and means to modify the diversion instruction in the switching system when such a change takes place. Alternatively, the termination point may be arranged simply to repeat the set-up process, causing the mobile unit to be re-registered with the interface unit, (which will not be apparent to the switching system, as it will perceive the same "virtual" base site controller), and to transmit a new call divert instruction to the revised address of the termination point.

The inventions disclosed in the aforementioned International patent applications allow the diversion of PSTN-compatible speech calls to the user's current location in the first telecommunications network. However, modern cellular telephone systems have other capabilities, in particular the data system known in the GSM standard as "Short Message Service" (SMS). In the cellular network data messages are carried over a separate data network and cannot be diverted to a different directory number, such as that of the user's current satellite terminal, or the satellite address currently associated with the user's terminal, in the same way as voice calls because the PSTN cannot handle them. Moreover, with regard to arrangements in which the call is routed to a standard satellite telephone terminal as provided in aircraft, such terminals are not equipped to receive such messages.

A first aspect of the present invention provides a method of converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, wherein the address information in the original data message is

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replaced by address information appropriate to the selected display unit to generate an amended data message, and a new data message is created, addressed to the server of the information display system and having the amended data message as payload, and wherein the server converts the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

A second aspect provides apparatus for converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, comprising

means for replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message, and

means for creating a new data message addressed to the server of the information display system and having the amended data message as payload.

A third aspect provides server apparatus forming part of a server-based information display system for receiving messages generated by the apparatus defined above, for display by a selected display unit, the server comprising means for converting a data message formatted for display on a display unit of a first type into control instructions suitable to display the information content of the data message on an information display unit of a second type controlled by the server, the information display unit being identified in the data message

In the described embodiment the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset. The data message may be generated by the cellular switching system in response to a message being deposited in a call answering system.

In one arrangement, prior to transmission of the amended original data message to the server an alerting data message is created, indicative of the presence of the original data message, addressed to the server of the information display system, and carrying address information appropriate to the selected display unit, thereby causing the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and wherein the

amended original data message is forwarded to the server in response to an instruction from a termination point associated with the destination display unit. This ensures that data messages are only transmitted when the user has accepted them, thus allowing the network operator to charge the user for the service.

The amended data message may also include password data, the server being arranged such that when it receives a data message it causes the display means to indicate the presence of a data message, and displays the data message only if it receives a predetermined input from a user terminal associated with the display means.

Embodiments of the invention will now be described with reference to the Figures, in which:

Figure 1 is a schematic diagram showing the functional relationships between the systems which co-operate to form one embodiment of the invention

Figure 2 is a more detailed schematic diagram of the network termination and associated card reading equipment, which for illustrative purposes will be assumed to be on board an aircraft

Figure 3 is a diagram showing part of an alternative arrangement of network termination, arranged for co-operation with a cellular telephone handset

Figure 4 is a schematic diagram showing the functional relationships between the components of the fixed part of the first telecommunications system which co-operate in the invention,

Figure 5 is a schematic diagram of the switching system, interface unit, and associated parts of the second telecommunications system;

Figure 6 is a flow chart showing the process by which a diversion is set up in the second network to a termination connected to the first network

Figure 7 is a flow chart showing the process by which a call coming in to the second network is connected to a telephone connected to the first network

Figure 8 is a flow chart showing the process by which the second network restores the original settings for a telephone when it disconnects from the first network.

Figure 9 illustrates the forwarding process implemented to a data message.

Figure 10 illustrates a conditional forwarding process for a data message.

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Figures 11 and 12 show the general arrangement of the various components which co-operate in a further embodiment of the invention: Figure 11 shows the moveable vehicle-borne parts and Figure 12 the fixed, ground based, parts.

Figures 13 and 14 show the method of operation of this embodiment

Figure 15 is a flow chart showing a call diversion process, for use when the system has to be temporarily shut down.

The following embodiments illustrate the invention using a standard switched cellular network, using the terminology of the "GSM" standard for illustrative purposes. However, the invention is applicable to other cellular networks, including packet networks, which are used to carry data over a distributed computer network such as the "Internet", carrying messages using formats such as the "Internet Protocol" (IP). Thus, unless the context clearly demands otherwise, any reference in this specification to switching includes the equivalent routing functions in a packet network of this kind.

Figure 1 shows the general arrangement of the various components which co-operate in this embodiment. Note that traffic links (which can carry speech, data, etc) are shown as full lines, signalling links used only for call set up are shown as broken lines.

The onboard part 2 (shown in more detail in Figure 2) comprises one or more handsets 25 (which, in the alternative arrangement of Figure 3, are the users' own cellular telephone handsets 31), connected to a termination point 20 of the satellite network. The termination point 20 is in communication with a ground station 4, shown in more detail in Figure 4. In this embodiment, the communication link is made through an earth-orbiting satellite 6.

The principal components of the ground station 4 relevant to this invention are an antenna 44 which communicates, by way of the satellite 6, with the onboard system 2, an Access Control and Signalling Equipment (ACSE) 40 which carries out call switching functions to allow calls to be placed through the public switched telephone network (PSTN) 8 to other telephones 85, and a Card Management System 42 which authorises the use of an individual terminal 25 according to user identities entered with respect to that terminal. There is also a register 43 of card identities, to provide a correspondence between the user identities used by the satellite terminal and the corresponding cellular telephone user identities (not necessary if the cellular

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telephone identity is read directly by the terminal 20, as will be described with reference to Figure 3), and to provide billing information.

The card management system 42 interacts with an interface unit 52 of a "host" cellular telephone network 5, shown in more detail in Figure 5. This network 5 is connected to the public switched telephone network (PSTN) 8 and to other cellular networks 7 through a switching centre 50. Associated with the interface unit 52 there is an "aircraft location register" 41 which monitors the terminals currently served by each individual satellite, and modifies the functioning of the interface unit 52 when a terminal 20, for example on board an aircraft 2, moves from the coverage area of one satellite 6 (and its ground station 44) to another

The cellular network 7 illustrates in simplified form the system architecture of a "GSM"-standard cellular radio system, and the terminology used in this standard. The network 7 has a switching system (MSC) 70 to allow connection of one or more base transceiver sites (BTS) 74, through one or more base site control systems 72, to the PSTN 8 and thus to other telephones 85. A mobile telephone 75 may establish radio contact with one of the base stations 74 in order to make and receive telephone calls. The network 7 also includes a "Visitor Location Register" 71, which maintains details of those cellular telephones 75 currently co-operating with the network 7. Mobile telephones according to the "GSM" standard are capable of co-operating with different networks ("roaming" between networks). To allow this to take place, when a mobile telephone 75 changes from one network to another, the network to which it has moved retrieves data from a "Home Location Register" 73 permanently associated with the handset 75. The network 7 in which the Home Location Register 73 associated with a given handset is to be found is identifiable from the handset's identity code. The Home Location Register also records the identity of the network 7 with which the mobile handset 75 is currently operating.

The "host" network 5 operates like conventional cellular network, but is provided with an interface unit 52, which interacts with the mobile switching centre 50 as a base site controller would. This interface unit 52 may be in addition to one or more base site controllers (not shown). The interface unit does not interact with any base transceiver sites or mobile handsets, but obtains user details (in particular the identity of a mobile handset) from the card management system 42 to allow it to appear to the switching centre 50, and the HLR 73 in the user's home network, that

it is in radio communication with a mobile handset 25. It can then control the call forwarding instructions stored in the host network's VLR 51, to cause incoming calls directed to that handset to be diverted, through the switching system 40 of the satellite network 4, to the satellite terminal 20.

Figures 2, 3 and 4 illustrate a first embodiment of the invention, applied to a satellite telephone system such as that provided by the applicant company under the Registered Trade Mark "Skyphone". Figure 2 shows a first embodiment of the mobile part which has a standard card reader, whilst Figure 3 shows an alternative arrangement which allows a user to use his cellular telephone handset. Figure 4 shows the ground station.

The onboard system 20 shown in Figure 2 comprises a plurality of user terminals 21, 21a (only one shown in detail), connected by a multiplex and radio interface unit 28 to an antenna 29 which provides radio communication with a satellite 6. Each user terminal 21 has a card reading unit 23 into which an intending user can insert a card 24 or other data carrier providing user identification data. The data may give details of the user's credit card account, or a special account for the use of the onboard telephone service. The card reader 23 may be adapted to read the SIM (Subscriber Identity Module) of a GSM-standard cellular telephone. (It should be noted that one variant of the method according to the invention does not make use of the card reading apparatus 23,24,26, although it may nevertheless be present for use by other customers of the satellite system).

Further user terminals 21a may be set aside for non-voice applications, for example an onboard facsimile machine.

The user handset 25 provides the usual keypad, microphone and earphone to allow the user to make telephone calls. The user handset 25 and the card reader 23 are both connected to a processor 26 which converts data read from the card 24, and keystrokes input from the handset 25, into data signals for transmission over the radio link 29. It also provides identification data indicative of which of the terminals 21 it is. A further processor 27 performs analogue/digital conversion of speech signals from the handset 25.

The digitised signals from each terminal 21 are multiplexed and modulated onto a radio carrier in a interface unit 28, and transmitted from the antenna 29.

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The antenna 29 also receives signals which are demodulated and demultiplexed in the unit 28. Data signals are processed in the processor 26, whilst digitised speech is converted to analogue speech in the analogue/digital converter 27 and fed to the handset 25.

The interface unit 28 also includes a connection to the data bus 22 of the aircraft 2 giving access to aircraft parameters such as undercarriage deployment, "weight-on-wheels", time to destination, altitude, etc. When a predetermined condition indicative of the impending end of a flight is met, the interface unit 28 transmits a signal to the ground station to cause a deregistration signal to be transmitted to the card management system 42.

Because the onboard telephone system was originally designed for making outgoing calls, the handsets 25 provided in existing terminals 21 are not equipped with a suitable call alerting device. The handsets 25 could be modified to provide a buzzer or light to alert the user to an incoming call. Alternatively, to avoid distracting other passengers on the aircraft, the telephone terminal 21 may be connected to an at-seat entertainment system 200, to provide an alert either through the earpieces 202 or on the screen 201.

Instead of the terminals 25, an alternative arrangement may be used as shown in Figure 3. In this arrangement each onboard terminal 25 is replaced by an onboard interface device 311 to which a user's own mobile radio telephone 31 can be connected electrically, thereby allowing the mobile telephone to be used without using its radio antenna. It is a modification of the system described in the applicant company's International Patent Application WO97/36442, published on 2nd October 1997, to which the reader is referred for further details. In this modified version a GSM (Global System for Mobile communication) mobile telephone 31 comprises r.f. transceiver circuitry 32 coupled to an antenna 33, base band signal processing and control circuitry 34, a rechargeable battery pack 35, a switch 36 and a socket 37. The processing and control circuitry 34 has a data output terminal 34a coupled to both the r.f. transceiver circuitry 32 and a first contact 37a of the socket 37. A data input terminal 34b of the processing and control circuitry 34 is coupled to the r.f. circuitry 32 and a second contact 37b of the socket 37. A third contact 37c of the socket 37 is coupled to a control input of the processing and control circuitry 34. Fourth and fifth contacts 37d, 37e of the socket 37, which are respectively for OV

and +V power supply lines, power the telephone 31, and may also be arranged to recharge its batteries 35. The +V terminal of the battery pack 35 is also connected to the processing and control circuitry 34 and to an input terminal of the switch 36. The output terminal of the switch 36 is coupled to a +V input terminal of the r.f. circuitry 32. A control terminal of the switch 36 is coupled to an output of the processing and control circuitry 34.

The interface unit 311 comprises a control circuit 312, a user input unit 313, including a keypad and a display, a V.24 33.6 kbit/s modem 314, a power supply unit 315 and a plug 316. The plug 316 has five contacts 316a-316e which correspond to contacts 37a-7e of the socket 37 of the mobile telephone 31. The first contact 316a of the plug 316 is coupled to a data input terminal of the control circuit 312 and the second contact 316b of the plug 316 is coupled to a data output terminal of the control circuit 312. A bi-directional serial link 318 is provided between the control circuit 312 and the modem 314 for modem control and data signals. The third contact 316c and fifth contact 316e of the plug 316 are coupled to the +V output of the power supply unit 315. The fourth contact 316d of the plug 316 is coupled to the interface unit's 0V supply wiring. The user input unit 313 is coupled to the control circuit 312 for the input of user commands and the output of display control signals from the control unit 312 to the user input unit 313. The +V output of the power supply unit 315 is also coupled to +V input terminals 312a, 313a, 314a of the control circuit 312, the user input unit 313 and the modem 314. The modem 314 is coupled to a telephone line 317 and the power supply unit 315 is arranged to receive power from an electricity supply 319.

When the user wishes to connect to the interface unit 311, he connects the plug 316 of the interface unit 311 to the socket 37 on his telephone 31 by a cable (not shown). The voltage on the third contact 37c of the socket 37 is detected by the processing and control circuitry 34 which thereby determines that the telephone 31 has been connected to the interface unit 311. The connection of the battery 35 to the power supply 315 by way of the connections 37d/316d and 37e/316e also allows the battery to be recharged.

Once the processing and control circuitry 34 has determined that the telephone 31 has been connected to the interface unit 311, it sends a control signal to the switch 36, causing it to open, isolating the r.f. circuitry 32 from the battery

pack 35 and the power supply 315 in the interface unit 311. The processing and control circuitry 34 also responds to the voltage on the third contact 37c of the socket 37 by selecting alternative control programs or constant data to allow for delays in the signal path from the telephone 31 to the controller 30 which are caused by the use of the satellite link 6 and the modems 314, 32.

In this arrangement, instead of the need for a separate card reader 23, the telephone 31 identifies itself to the telephone network 40/42 by generating its terminal identity code (IMSI in the case of a GSM telephone). The registration signal is not transmitted from the antenna 3 because the r.f. circuitry 32 is disabled. Instead, it is output to the interface unit 311 via the first contacts 37a, 316a of the socket 37 and plug 316

The operation of this onboard system will now be described with reference to Figure 6. When the card reader 23 or interface unit 311 detects the presence of a card 24 or handset 31 respectively, (step 601) it generates a prompt to indicate to the user that he may wish to have calls diverted to the onboard system. If the user requires this service, he enters a code on the keypad of the handset 25, 31 which causes a divert request to be generated (step 602). The details from the card 23 (or SIM of the handset 31) are then passed to the processor 26 which also provides the identity of the terminal 21 (step 603) and transmits the data to the interface unit 28.

Alternatively, these steps (602, 603) may be activated by the user without a card, by dialling an access code (divert request 602) followed by further keystrokes to identify the account to be used (terminal identity step 603). These keystrokes may include the user's MSISDN (which, as his own directory number would be known to him). To prevent misuse of the system by unauthorised personnel, a security code (Personal Identification Number: "PIN") may be added. This code may have been issued previously to the user, or the user may request such a code by making a call using the satellite system to his home network's customer service department and providing personal details to the operator to prove his identity.

The user may select for the identity of a terminal 21a other than his own at seat terminal 21 to be selected as the destination for incoming calls. For example, if his MSISDN code (or one of them) relates to a facsimile machine having cellular capability, he may request that incoming calls to that number be directed to an onboard facsimile machine 21a.

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The data received by the interface unit 28 is then transmitted to the ground station 4 (step 604). The further steps (605-615) in the process are carried out by the co-operating networks 4, 5 and will be described later.

If the user decides that he no longer wishes to have his calls diverted to the terminal 21, he may cancel the diversion instruction by entering a special code on the keypad of the handset 25, 31. Disconnect codes may also be generated in the interface unit 28 for all the termination points 21, either by the cabin crew or automatically in response to a signal detected on the aircraft's data bus 22 which is indicative of the imminent end of the journey, such as undercarriage deployment, weight on wheels, low altitude, or time remaining to destination as determined by the aircraft's flight management system. The disconnect instruction is transmitted (step 801, Figure 8) by way of the switching system 40 in the ground station 4, to the interface unit 52 whose operation (steps 802 to 805) will be described later.

The Ground Station 4 shown in Figure 4 has a radio antenna system 44 for communicating with the terminal 20, through a satellite link 6 or otherwise. Signals are handled by an Access Control Signalling Equipment (ACSE) 40 which carries out switching functions to route calls to or from the public switched telephone network (PSTN) 8.

A card management system 42 comprises a data acquisition unit 47 which reads data transmitted from the card reader 24, and/or keyed in by the user, to identify the type of user, confirm the user's account details and arrange billing for any calls made, through a billing system 45 which raises invoices, or interacts with the systems of a credit card operator or bank.

In the existing onboard systems a user cannot receive calls, unless the caller knows the unique "AES" number of the handset 21, 21a. This is unlikely, as the number depends on the identity of the aircraft, the seat, and the serving satellite or base station.

The equipment just described is augmented in the present embodiment by an interface 46 with the host network 5, and through that to the Home Location Register 73 of each network 7 (Figure1) whose subscribers are to be given access to the service, which stores a concordance between the card identities and the card-holder's cellular radio telephone number (MSISDN: mobile systems integrated services data network number), on request from the data acquisition unit 47, which is

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arranged to recognise the card identities which require such translation. In a preferred embodiment the concordance is supplied to a register 43 in the ground station by the operator of user's home network 7, when the network operator provides the user with the card. The operator of the home network 7 also records the concordance in its own Home Location Register 73. This arrangement allows the existing card readers 23 to be used on board the aircraft, without modification. If the users' mobile subscriber identities are supplied from the onboard system, either by reading the identity (reader 311) or by the user keying it in, the store 43 can be used for verification, or omitted. Billing information is also returned to the user's home network 7.

The operation of the ground station 4 will now be described with reference to Figure 6. The data acquisition unit 47 receives the card details from the reader 23 (see steps 601 to 604 already discussed) and if it identifies as those details as corresponding to a cellular user (step 605), it retrieves the cellular user identity from the store 43 containing this concordance, or from the HLR 73 of the user's home network, (step 606). (This step can be omitted if the user's mobile network identity is provided by the onboard apparatus 20).

The data transmission unit 46 then generates a signal for transmission of the cellular user identity, together with the identity of the terminal 21, to the cellular network 5 acting as host to the interface (step 607). This host network 5 will, in general, not be the same as the user's home network 7. The further steps (608 to 615) in this process will be described later, with reference to Figure 5.

If a cancellation signal is received from the aircraft in respect of a given terminal 21, (step 801, previously discussed) the data transmission unit 46 transmits a "cancellation" signal to the host network 5. As already discussed, the cancellation signal may be generated either for an individual handset 21, by its user dialling a special code, or for all handsets as the result signals received by the radio interface unit 28 over the aircraft's data bus 22 indicative of the imminent end of the flight.

An embodiment of the host network 5 of the invention is shown in Figure 5. Its operation will be discussed with reference to Figures 6, 7 and 8 In this network 5 an interface unit 52 is provided, which is arranged to appear to the switching system 50 as if it is a normal base station of the cellular radio system.

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In order to do this, the interface unit 52 is provided with a data acquisition unit 54 which receives from the card management system 42 of the ground station 4 the identity of the cellular telephone it is to represent, and the AES identity of the onboard terminal 20 (step 608, Figure 6). Mobile telephones have three identification codes: the equipment identity (IMEI, which will not be discussed further here), the directory number (MSISDN) and the actual SIM identity (IMSI). In practice, for security reasons, the IMSI is not made generally known, and a user is normally identified by his MSISDN unless the SIM itself is used. If the SIM is used in the card reader 23, or the user's telephone is used in the arrangement of Figure 3, (in which case no concordance is required) the IMSI can be read directly from the data received by the data acquisition unit 54. However, if the user keys in his own identification data (step 603), or a concordance is provided by the card reader 23, the data acquisition unit will receive the MSISDN, and not the IMSI. (There may also be a PIN or other security code, which is checked by the data acquisition unit 54).

In the GSM standard it is possible to obtain an IMSI if the MSISDN is known by interrogating the appropriate Home Location Register 73. To do this, the interface unit 52 transmits a "request for routing information" signal, using the MSISDN (step 609). The standard HLR 73 responds to such a request with a signal which includes the IMSI corresponding to the MSISDN in the request (step 610).

(The "request for routing information" signal was provided under the GSM standard as a means of obtaining routing information for data messages intended for a destination for which only the MSISDN number is known. However, it may be used for other purposes, such as that described above).

The telephone identity (IMSI), whether obtained directly from the card reader 23 or handset 31, or indirectly as just described, is passed to a network registration unit 55 which exchanges signals with the mobile switching centre 50 in the same way that a real cellular telephone would do. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 5 (step 611). The Home Location Register 73 records that the mobile handset is now registered with host MSC 50 (step 612).

It should be noted that, although registered with the host MSC 50, the user's mobile handset is not operatively connected to the host MSC 50 - in fact the mobile handset may be switched off to allow the card 24 to be used, or it may be connected

to a user terminal 311. The user may be in an aircraft, anywhere in the world within the coverage area of the satellite network.

The user's details, including any diversion instructions, are sent by the Home Location Register 73 to the network's VLR 51 (step 613). A store 57 records a copy of the details of these diversion instructions (step 614).

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 7, and the HLR 73 provides information to identify the MSC 50 where the mobile handset can currently be found. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 5, as the mobile user is currently registered there.

The data acquisition unit 54 in the interface 52 now passes the directory number of the termination point 21 to a call diversion instruction unit 56, which generates a "divert on busy" instruction to the VLR 51 (step 615). This is a standard divert arrangement, and operates such that should the mobile unit appear to be engaged on another call when a call attempt is made to it, the call attempt is diverted to a specified directory number, in this case the termination point 21 or 21a, identified by its AES code. This diversion instruction replaces any previous instruction held in the VLR 51. Further settings may be made in the call diversion instruction unit 56, such as the identification of a termination point 21 to which a data message is to be sent when a call is diverted to another termination point 21a.

Of course, there is in fact no mobile telephone connected to the interface unit 52, and therefore it is unable to connect incoming calls to the mobile telephone in the conventional way, or to identify the current true operating condition (switched off, busy, ready for calls, etc) of the mobile handset. Instead, the system responds to a call attempt as will now be described with reference to Figure 7.

When a call attempt is made (step 701), the home MSC 70 to which the call is initially routed obtains from the HLR 73 the current location of the mobile telephone (step 702), and on receiving the identity of the host MSC 50 (step 703), directs the call there (step 703). The host MSC 50 in turn transmits the call attempt to the currently serving base station, which is in fact the interface unit 52 (step 704). If the disconnect procedure (to be described later with reference to Figure 8) has been carried out, the call will not be connected to the onboard system (step 705), and instead a signal is transmitted back to the home MSC 70. Otherwise, call

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attempts received by the interface unit 52 are handled by a call request handling unit 58, which automatically returns a "busy" signal to any such request (step 706). The MSC 50, on receiving the "busy" signal, retrieves the diversion information from the VLR 51 (step 708) allowing it to route the call through the PSTN 8 to the user terminal 21, 21a (step 710).

In the event that the destination terminal 21a is not the terminal 21 that originated the instruction, the call request handling unit 58 of the ground-based interface unit 52 may be arranged such that whenever a message addressed to the user's MSISDN is diverted to the terminal 21a, the call request handling unit 58 also generates a data message (step 711) for transmission to the instructing terminal 21 by way of the MSC 50, PSTN 8, and satellite system 4, 6 (step 712) either during the call or after it ends. Such a message can be used for example to alert the user of the terminal 21 that a facsimile message addressed to him has been sent to the terminal 21a. As with the call alerting process described above, the message may be displayed using the in flight entertainment system 200.

If a second call attempt is made, the ACSE 40 may identify that the divert instruction will not work as it is currently handling a diverted call to that number. The default condition in such cases is to arrange for the second call to be diverted to the user's voicemail address (not shown) in his home network 7. The user may also be sent a data message to inform him of the new voicemail message. This message would normally be sent to the mobile unit, which appears to the MSC 50 to be co-operating with the interface unit 52, so the MSC 50 transmits the data message to the interface unit 52 (step 711). In order to inform the user of the new voice mail message, the interface unit 52 now regenerates the data message for forwarding to the user terminal 21 via the MSC 50, PSTN 8, and satellite system 4, 6 (step 712) either during the call or after it ends. However, data messages are not suitable for switching via the MSC 50 and PSTN 8, nor for handling by the on-board terminal 21 as it is only equipped for voice. Because the IMSI is recorded in the HLR 73 as being registered with the "Virtual" BSC, or interface unit, 52, any other data messages intended for the user will also be routed to the interface unit 52, and require forwarding to the user. The way this is achieved, according to the invention, will be discussed later, with reference to Figures 9 and 10. As with the call alerting process

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described above, the message may be displayed using the in flight entertainment system 200.

Generally, the detection of the same IMSI from two sources causes an HLR to disconnect both callers as a fraud prevention measure. Since this system causes the generation of an IMSI from the interface unit 52, instead of directly from the mobile telephone to which that IMSI relates, the user's mobile telephone should be switched off, or connected to an onboard interface device 311 which disconnects the radio circuits, to prevent the network detecting the IMSI in two places, which would disrupt the call routing processes in the HLR 73 and elsewhere.. If the user is on board an aircraft, he should not be using his mobile handset in the conventional manner, and so there should be no problem. However, if the user, having left the aircraft, switches on his telephone 75 before the network 5 has reported a loss of the mobile unit from its own network, the mobile unit may be perceived by the HLR 73 as being registered with two networks at once. To avoid this possibility, a disconnection procedure is followed as described with reference to Figure 8.

As already discussed, to stop calls being diverted to the user termination point 21, and restore the original call diversion settings, a disconnection signal may be transmitted from the onboard system 28 to the host network's interface unit 52 (step 801). The disconnection signal may be activated by a special code entered by the user, or it may be generated automatically by data collected from the aircraft's data bus 22 indicative of the imminent end of the flight. Note that this disconnection signal merely controls the interface 52 – it has no effect on calls in progress, which is routed from the host MSC 50 by way of the PSTN 8.

The disconnect instruction is received by the interface unit 52 (step 802) and causes the call diversion instruction unit 56 to retrieve the call diversion data stored in the store 57 (step 803) and generate a call diversion instruction restoring the original settings to the VLR 51 (step 804). This ensures no further calls are routed to the onboard terminal 21.

The interface unit 52 next causes the network registration unit 55 in the interface unit 5 to instruct the MSC 50 that the user is no longer connected to the network 5 (step 805). This allows the mobile unit to register with another network 7 in the normal way. Call attempts to the user number will continue to be routed by the Home HLR 73 to the MSC 50 with which the mobile unit was most recently

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registered, (i.e. the host MSC 50) but as that MSC cannot now find the mobile unit, any such incoming call will return a "not found" signal to the home MSC 70 which will divert the call according to any diversion instructions set up, or fail the call. Alternatively, the host MSC 50 may handle the diversion itself if the mobile unit is "not found", using the original diversion instructions now in the VLR 51, having been retrieved from the store 57 (step 804 above).

Having left the aircraft, the user may switch on his mobile telephone 75, which will register with the local network (e.g.7) and will retrieve the original divert information from the HLR 73 (note that in general the HLR 73 will not be in the same network), and will cause all data relating to the user to be deleted from the VLR 51 in the "host" network 5.

An alternative embodiment, in which voice calls are handled by a user's cellular handset but data calls and call alerts are still handled by the onboard in-flight entertainment system, is depicted in Figures 11 and 12.

The system can be categorised into two main components: namely the onboard part 101 (Figure 11) and the fixed part 102 (Figure 12), which communicate with each other through a satellite connection 6. The onboard part (Figure 11) comprises a moveable cellular system 111,112,114,116 and the onboard part 113 of the tracking radio system. The fixed part 102 (Figure 12) is itself in two parts, namely a satellite ground station 4, which is similar to that shown in Figure 1, and the fixed "host" cellular network 104, which is a public land mobile network (PLMN) 104, in turn interconnected with other PLMNs 70 and conventional wired networks (PSTN) 8 to allow calls to be made between users of different networks.

As shown in Figure 11, the system provides a cellular radio subscriber with the ability to use his own handset 110 aboard an aircraft, located anywhere within an agreed satellite coverage area. The coverage on board the aircraft can be provided by any suitable means, using known radio repeater distribution systems 111 to provide radio coverage wherever required.

The distribution system 111 is fed by a base transceiver site 112, served by a base site controller 114 and a mobile switching centre 116, which may have its own visitor location register 117, for onward transmission to the satellite ground station 4 via a satellite tracking system 113. The satellite tracking system may be a

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conventional satellite telephone system as commonly used for ship-to-shore communications, and for the airborne systems previously referred to, providing a satellite link 6 from the aircraft or ship's satellite tracking system 113 to the satellite ground station 4. The satellite ground station 4 is in turn connected to the mobile switching centre (MSC) 141 of a conventional cellular telephone system, referred to hereinafter as the "host" system 104 and shown in Figure 12.

The satellite link 4 – 6 - 113 is therefore between the onboard MSC 116 and an MSC 141 (the "host" MSC) of the land-fixed "host" network 104. The user record in the home location register (HLR) 73 of the user's home network identifies the mobile unit 110 as currently served by the land-based network 104, and routes the call to the host MSC 141, which will in turn recognise from its entry in the land based VLR 144 that this mobile unit is currently being served by the onboard MSC 116. The way this is arranged will be described later.

This arrangement allows integration of the onboard MSC 116 with the onboard switching capability associated with the conventional satellite telephone system and the aircraft's internal communications system 115. In particular it provides a simple means of providing passengers and crew with a "Wireless PBX" facility, as users on board the aircraft can communicate with each other through the BSC 114 without using the satellite link 4 - 6 - 113. When a call is made by a cellular telephone 110, the onboard MSC 116 first consults its VLR 117 to establish whether the called party is currently served by the same MSC 116. If this is the case, it connects the call without the use of any inter-MSC links. Thus calls made between two users both on board the aircraft 101 may be made without the use of the satellite link 4 – 6 – 113. The satellite connection provides several voice channels and a signalling channel (supervisory control – management channel), and can be made by any connection of appropriate capacity.

The host network 104 may support one or more further base site controllers 142 controlling conventional base transceiver sites 74. The host Mobile Switching Centre 141 also has an associated "Visitor Location Register" 144 which, in conventional manner, records details of the cellular telephones currently co-operating with the Mobile Switching Centre 141, so that details can be exchanged with the Home Location Register 73 of the user's home network for billing purposes, and to allow incoming calls to be routed correctly. These details include the identity of the

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link 4, 142 to which the user is connected, allowing different call charges to be applied for use in different cells, and in particular to distinguish between calls made through the onboard base transceiver site 112 and calls made through conventional base site controllers 142.

In the cellular mobile network 104, standard GSM functionality is used. Users aboard the aircraft will be able to use this service provided they are subscribers to the host network 104, or any other network 70 which has a "roaming" agreement with the host network 104, provided the subscriber has the roaming capability authorised by his service provider.

In this embodiment of the invention, the "host" network 104 operates like a conventional cellular network, but is provided with an interface unit 148 for interworking with the satellite ground station 4. This interface 148 allows the switching centre 141 to obtain user details (in particular the identity of a mobile handset) from the satellite system 4 to allow it to appear to the network 104, and thus to the HLR 73 in the user's home network, that the mobile handset is in radio communication with a base station under the control of the mobile switching centre 141 when in fact it is in communication with the onboard MSC 116. The mobile switching centre can then arrange for call forwarding instructions to be stored in the VLR 144, to cause incoming calls directed to that handset to be diverted, through the switching system 40 of the satellite network 4, to the onboard MSC 116.

The operation of the system is as follows. When a mobile unit 110 first makes contact with the onboard cellular system 101 it transmits its identity code (IMSI) to the onboard MSC 116 in the usual way. The onboard MSC 116 can obtain verification data from the user's HLR 73 (identified by the IMSI code) to verify the authenticity of the user, and permit outgoing calls. However, because the onboard MSC 116 is only contactable through the satellite system, incoming calls to the mobile unit 110 cannot be reliably routed to the onboard MSC 116 over a conventional link. In order to avoid a requirement for special facilities in each network 70 it is convenient to make the mobile unit 110 appear to be working to a conventional mobile switching centre 141.

When the onboard MSC 116 detects a call attempt or registration attempt from a mobile unit 110, it collects from the mobile unit its identity code (IMSI) and passes it to a processor 118. If the processor 118 has not previously done so, it

generates a temporary onboard identity for association with the mobile identity code (IMSI), and stores it in a memory 119. For aircraft fitted with at-seat satellite telephone equipment, each handset has an identity code (generally related to the number of the passenger seat to which the handset is fitted) to allow outgoing calls to be billed to the correct user and to allow the system to be used to communicate between passengers. Spare numbers in this system (referred to herein as "pseudo seat numbers" - PSN) may be used as the temporary onboard identities allocated to mobile handsets working to the onboard MSC 116. If the mobile handset 110 has previously contacted the onboard MSC 116, and not subsequently de-registered, the processor 118 now retrieves the PSN corresponding to the IMSI from the memory 119.

As with the arrangement of Figure 1, the present embodiment allows the host network to translate the called party's IMSI to an AES code (including seat number), which in this case is a pseudo-seat number (PSN) allocated randomly from the numbers left spare after codes have been allocated for at-seat terminals. The translation takes place in the host network, without the need for the caller to know the AES code. The temporary onboard identity code PSN associated with the called party's IMSI is returned to the onboard MSC 116 which sets up a call over the satellite system to the host MSC 141 of the host network 104. The satellite system requires certain authentication data on call set up, namely the AES code and a subscriber identity code which normally identifies an individual subscriber to the satellite system or, if the user does not have an account with the satellite system, credit card details or other details to allow payment to be made. In the present case the onboard MSC 116 provides the cellular telephone's code (IMSI) as the subscriber identity code. For security reasons, this code may be encrypted. If an outgoing call attempt is being made, a call attempt is then made to the number dialled; otherwise a special code, referred to herein as the non-call code ("NCC") is used.

If the caller has not previously been registered, but a special non-call registration code is used, the ACSE 40 of the ground station 4 recognises it as being an authorised free call to the host MSC 141 and routes it accordingly. Calls using this code are permitted even if the IMSI has not previously been registered with it.

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The host network 104 will, in general, not be the same as the user's home network 70. In the host network 104 an interface unit 148 provides certain additional functionality to co-operate with the satellite ground station 4.

When a call is received by the satellite ground station 4 using the non-call code (NCC) the ACSE 40 retrieves the data and passes it to an interface unit 148, which retrieves the identity (IMSI) of the cellular telephone, and the PSN associated with it. The IMSI (de-encrypted if necessary), is passed to a network registration unit 145 which exchanges signals with the host mobile switching centre 141 in the same way that a real cellular telephone would do if registering through one of its base stations 74. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 104. The Home Location Register 73 records that the mobile handset is now registered with host MSC 141.

It should be noted that, although registered with the host MSC 141, the user's mobile handset is not operatively connected to the host MSC 141. The user, and the handset, may be on a suitably equipped vehicle anywhere in the world within the coverage area of the satellite network 6.

The user's details, including any diversion instructions, are next sent by the Home Location Register 73 to the network's VLR 144. A store 147 records a copy of the details of these diversion instructions for subsequent retrieval when the mobile unit deregisters.

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 70, and the HLR 73 provides information to identify the MSC where the mobile handset is expected to be found, which is the host MSC 141. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 104, as the mobile user is currently registered there.

The interface unit 148 passes the AES code to a call diversion instruction unit 146, which generates a "divert on busy" instruction to the VLR 144. This is a standard divert arrangement, and operates such that should the mobile unit appear to be already engaged on a call when a new call attempt is made to it, the new call attempt is diverted to a specified directory number, in this case the AES code

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allocated to the mobile unit. This diversion instruction replaces any previous instruction held in the VLR 144.

Finally, the registration process is closed by returning an authorisation code from the host MSC 141 to the subscriber management system 42 of the satellite system 4, to allow the IMSI to be recognised as a valid user identification for subsequent outgoing calls.

The aircraft may have an at seat information system 200 with provision for connection of the handset 110, similar to the hands-free sets commonly provided in cars. This allows audio signals to be transferred to the at-seat system's headset 202, preventing disturbance to other passengers. The at-seat system may also have means for collecting ringing tone from the handset 110, and generating a visual alert on the display screen 201 or an audible one on the headset 202.

The operation of the system will now be described with reference to Figure 13. When a mobile unit 10 first makes contact with the onboard cellular system 101 it transmits its identity code (IMSI) to the onboard MSC 116 in the usual way. The onboard MSC 116 can obtain verification data from the user's HLR 73 (identified by the IMSI code) to verify the authenticity of the user, and permit outgoing calls. However, because the onboard MSC 116 is only contactable through the satellite system, incoming calls to the mobile unit 110 cannot be reliably routed to the onboard MSC 116 over a conventional link. In order to avoid a requirement for special facilities in each network 70 it is convenient to make the mobile unit 110 appear to be working to a conventional mobile switching centre 141.

When the onboard MSC 116 detects a call attempt or registration attempt from a mobile unit 110, (step 1601) it collects from the mobile unit its identity code (IMSI) and passes it to a processor 118. If the processor 118 has not previously done so, it generates a temporary onboard identity for association with the mobile identity code (IMSI), and stores it in a memory 119 (step 1602). For aircraft fitted with at-seat satellite telephone equipment, each handset has an identity code (generally related to the number of the passenger seat to which the handset is fitted) to allow outgoing calls to be billed to the correct user and to allow the system to be used to communicate between passengers. Spare numbers in this system (referred to herein as "pseudo seat numbers" - PSN) may be used as the temporary onboard identities allocated to mobile handsets working to the onboard MSC 116. If the mobile handset

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110 has previously contacted the onboard MSC 116, and not subsequently de-registered, the processor 118 retrieves the PSN corresponding to the IMSI from the memory 119 (step 1603).

In existing onboard systems a user cannot receive calls unless the caller knows the unique "AES" number of the at-seat terminal 201, which is made up of the seat code and an identity code of the aircraft (which together make up a unique "AES" code). It is unlikely, even for a normal satellite handset, that a caller would know the AES code, as the number depends on the identity of the aircraft, the seat, and the serving satellite or base station. (It should be noted that the passenger list of an aircraft is not normally released to the general public until the flight has ended, for security reasons). The present embodiment allows the host network to translate the called party's IMSI to an AES code, which includes a pseudo-seat number (PSN), which is allocated randomly from the numbers left spare after codes have been allocated for at-seat terminals. The translation takes place in the host network, without the need for the caller to know the AES code.

The temporary onboard identity code PSN associated with the called party's IMSI is returned to the onboard MSC 116 which sets up a call over the satellite system to the host MSC 141 of the host network 104 (step 1604). For a normal satellite call, the satellite system requires certain authentication data on call set up, namely the AES code and a subscriber identity code which normally identifies an individual subscriber to the satellite system or, if the user does not have an account with the satellite system, credit card details or other details to allow payment to be made. In the present case the onboard MSC 116 provides the cellular telephone's code (IMSI) as the subscriber identity code. For security reasons, this code may be encrypted. If an outgoing call attempt is being made, a call attempt is then made to the number dialled; otherwise a special code, referred to herein as the non-call code ("NCC") is used.

The satellite ground station 4 shown in Figure 4 has a radio antenna system 44 for communicating with the onboard system 101, through a satellite link 6 or otherwise. Signals are handled by an Access Control Signalling Equipment (ACSE) 40 which carries out switching functions to route calls to or from the public switched telephone network (PSTN) 8.

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A subscriber management system 42 in the satellite ground station comprises a data acquisition unit 47 which reads identification data transmitted from the aircraft (step 1605) to identify the subscriber, confirm his account details and arrange billing for any calls made, through a billing system 45 which raises invoices, or interacts with the systems of a credit card operator, bank, or other telephone operator. In the present case the card management system recognises the IMSI transmitted as the subscriber identity. Provided the IMSI has previously been registered with the subscriber management system 42 (as will shortly be described: step 1616) the call is authorised using the satellite system's authorisation checking and billing system as for any call from an onboard satellite terminal, and connected to the PSTN 8 (step 1606), billing details being passed to the home network through the host MSC 141.

If the caller has not previously been registered, but a special non-call registration code is used, the ACSE 40 recognises it as being an authorised free call to the host MSC 141 and processes it accordingly (step 1607) by retrieving the data and forwarding it to the interface unit 52 in the host network 5 . Calls using this code are permitted by the subscriber management system 42 even if the IMSI has not previously been registered with it.

The host network 5, 104 will, in general, not be the same as the user's home network 70. In the host network an interface unit 148 provides certain additional functionality to co-operate with the satellite ground station 4.

When a call is received from the satellite ground station 4 using the non-call code (NCC) the ACSE 40 transmits the data to the interface unit 148 (step 1608). The interface unit 148 then retrieves the identity (IMSI) of the cellular telephone, and the AES identity of the onboard terminal 201 (step 1608, Figure 13). The IMSI (de-encrypted if necessary), is passed to a network registration unit 145 which exchanges signals with the host mobile switching centre 141 in the same way that a real cellular telephone would do if registering through one of its base stations 74. The mobile switching centre therefore informs the user's Home Location Register 73 that the mobile telephone is now registered with the network 104 (step 1611). The Home Location Register 73 records that the mobile handset is now registered with host MSC 141 (step 1612).

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It should be noted that, although registered with the host MSC 141, the user's mobile handset is not operatively connected to the host MSC 141. The user, and the handset, may be on a suitably equipped vehicle anywhere in the world within the coverage area of the satellite network 6.

The user's details, including any diversion instructions, are next sent by the Home Location Register 73 to the host network's VLR 144 (step 1613). A store 147 records a copy of the details of these diversion instructions (step 1614).

Conventionally, any incoming calls for a mobile user are sent in the first instance to the user's home network 70, and the HLR 73 provides information to identify the MSC where the mobile handset is expected to be found, which is the host MSC 141. Consequently, in the present arrangement, any incoming calls intended for the mobile user will now be directed to the network 104, as the mobile user is currently registered there.

The interface unit 148 passes the AES code to a call diversion instruction unit 46, which generates a "divert on busy" instruction to the VLR 144 (step 1615). This is a standard divert arrangement, and operates such that should the mobile unit appear to be already engaged on a call when a new call attempt is made to it, the new call attempt is diverted to a specified directory number, in this case the AES code allocated to the mobile unit. This diversion instruction replaces any previous instruction held in the VLR 144.

Finally, the registration process is closed by returning an authorisation code from the host MSC 141 to the subscriber management system 42 (step 1616) to allow the IMSI to be recognised as a valid user identification for subsequent outgoing calls.

Of course, although the mobile telephone 10 is recorded in the home location register 73 and in the host's visitor location register 144 as being connected to the host MSC 141, it is not really there and therefore the host MSC 141 is unable to connect incoming calls to the mobile telephone in the conventional way, or to identify the current true operating condition (switched off, busy, ready for calls, etc) of the mobile handset 110. Instead, the system responds to a call attempt as will now be described with reference to Figure 14.

When a call attempt is made (step 1701), the MSC in the home network 70 to which the call is initially routed obtains from the HLR 73 the current location of the

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mobile telephone (step 1702), and on receiving the identity of the host MSC 141, directs the call there (step 1703). The host MSC 141 in turn attempts to transmit the call attempt to the currently serving base station, which is in fact the interface unit 148 (step 1704). If the disconnect procedure already described with reference to Figure 8) has been carried out, the call will not be connected (step 1705) and a signal is transmitted back to the home MSC 70. Otherwise, the interface unit 148 automatically returns a "busy" signal to any such request (step 1706). Note that the interface unit 148 has no information regarding the true operating state of the mobile unit 110. It is merely arranged to emulate the target mobile unit's response to a call attempt when the target mobile unit is in the "busy" condition.

The host MSC 141, on receiving the "busy" signal, checks whether any incoming call currently in progress to that mobile handset has already been diverted (step 1707). (This is a standard procedure, done to ensure that call diversions are not attempted if they will not actually succeed). If there is no such diverted call in progress, the host MSC 141 retrieves the diversion information (the AES) from the VLR 144 (step 1708) allowing it to route the call through the PSTN 8 and the satellite system 3 to the onboard system 101 (step 1710).

The onboard system 101 routes incoming calls to a node of the onboard system according to the AES code. If the node is connected to a real at-seat terminal, the call is simply routed to that terminal. However, in this case, the code corresponds to a pseudo seat number, which the onboard satellite system switch 113 recognises as meaning that the call is to be routed to a node connected to the onboard MSC 116. The onboard MSC 116 uses the processor 118 to retrieve from the memory 119 the cellular identity (IMSI) corresponding to the PSN, (step 1711) and then connects the call to the mobile handset 110 having that identity in the conventional manner (step 1712). Thus the interaction between the onboard MSC 116 and the handset 110 is entirely conventional: ordinary handsets can be used and no initial authorisation is required other than the standard procedures used to ensure that international "roaming" is permitted.

If a second call attempt is made to a handset already in use, the ACSE 50 will identify that the divert instruction will not work as it is already handling a diverted call to that number. The default condition in such cases is to arrange for the second call to be diverted to the users' voicemail address (not shown) in his home

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network 70. The user may also be sent a message to inform him of the new voicemail message. This message would normally be sent to the mobile unit, which appears to the host MSC 141 to be co-operating with the interface unit 148, so the host MSC 141 transmits the data message to the interface unit 148 (step 1711). In order to inform the user of the new voice mail message, the interface unit 148 now regenerates the data message for forwarding to the onboard MSC 116 via the satellite system 3 (step 1712) for alerting the user terminal 110 either during the call or after it ends.

As the onboard system 101 is itself mobile, being on board an aircraft, call routing to that termination may require revision from time to time. For example, the "Inmarsat" satellite system comprises several geostationary satellites, which each provide cover for part of the earth's surface. These areas of coverage overlap to a large extent, but nevertheless on a long flight the aircraft may pass out of the area covered by one satellite into that served by another. This causes a small but significant change in the network address AES of any terminal on board the aircraft. The aircraft location register 41 monitors the identity of all aircraft currently being handled by the satellite ground station 4. When an aircraft moves into range of a different satellite 6, the call diversion unit 146 responds by transmitting a new call diversion instruction to the VLR 144, so that any further incoming call attempts are diverted to the new network address (AES) of the node corresponding to the terminal 110. Note that the diversion store 147 is not updated.

Note also that this does not affect calls already in progress. There is usually sufficient overlap in satellite coverage areas that handover from one satellite or base station to another can be arranged to take place when no call is in progress

During the flight the user may decide that he no longer wishes to have his calls diverted to the terminal 110, and switches it off. The onboard MSC 116 will therefore fail to locate the mobile handset 110 at the next registration update. As previously discussed, it is also desirable to disable the onboard system 101 when the aircraft is on approach to landing, to avoid interference with aircraft systems at this critical point in the flight (or distractions to passengers in the event of an emergency), and also to avoid interference with base stations on the ground. Disconnect codes may therefore be generated in the onboard MSC 116 for all the handsets 110, either by the cabin crew or automatically in response to a signal

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detected on the aircraft's data bus 22 which is indicative of the imminent end of the journey, such as time remaining to destination (as determined by the aircraft's flight management system), low altitude, deployment of undercarriage, or weight on wheels.

On receiving a de-registration signal (steps 801,802 Figure 8), the host network 104 retrieves the original divert information from the store 147 (step 803) and stores that in the VLR 144 (step 804), thereby restoring the user's own selected divert instructions automatically.

Once he has left the aircraft, the user may switch on his mobile telephone 110, which will register with the local network (e.g. network 70), informing the home location register 73 of the location update (note that in general the HLR 73 will not be in the same network as the local network 70). The HLR 73 retrieves the user's VLR settings from the previous host network 102. Because the original VLR data has been restored (step 804), the temporary divert data used whilst the user was connected to the onboard system is not fed back to the HLR. All data relating to the user can then be deleted from the VLR 44 in the "host" network 102.

In use, both parties to a call, and most of the cellular network, operate normally. The cellular telephone 110 co-operates with the base station 112 on the aircraft as it would with any other base station 74. The home location register 73 identifies the cellular telephone 110 as currently served by the host MSC 141, and routes incoming calls accordingly. This invention therefore allows connection to be made to conventional handsets 110 using standard cellular telephony equipment. The operation of the host MSC 141 and the onboard MSC 116 are both largely conventional except for the number translation functions carried out by the interface units 118, 148. Using roaming capabilities, just one host MSC 141 can provide connection to a large number of airborne MSCs 116, anywhere in the range of the satellite system 4, 6.

To allow the use of the at seat display system 201 for data messages, not suitable for transmission over the PSTN and satellite system in their original form the interface unit 52 (Figure 5), 148 (Figure 12) is provided with a data handling processor 53,149 for receiving data messages received over a packet data system 9 by way of the MSC 50,141 and intended for users currently associated with the interface unit 52,148. These messages include SMS messages sent from other

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callers, and SMS messages generated by the MSC 50,141 itself to alert the user that a message has been sent to the voice mail system. The format of such a message is shown in Figure 9, and the process of sending and receiving it is shown in Figure 10.

The original message 900 basically consists of a data payload 901 and an address 902, which is the IMSI of the destination mobile telephone (figure 9a).

When the interface unit 53,148 receives such a data message (step 990) it retrieves from the data acquisition unit 54,149 the data network address of the at-seat entertainment terminal 201 corresponding to the user's cellular identity which was originally provided to the data acquisition unit 54,149 when the user carried out the registration procedure (step 991). The interface unit 53,148 next generates a data call to that address (step 992), in a form suitable for transmission by the MSC 50,141 (step 993) over the packet data network 9 to the aircraft, with an address header corresponding to the data network address of the user's at-seat terminal 201,201. This data call may be a short message to indicate that a message is awaiting delivery, and displaying on the screen 201 an invitation to the user to dial a special code on his handset 25,110 to accept the message (step 994), and any charge associated with it. This acceptance is transmitted back, by way of the MSC 50, 141 to the interface unit 53,148 (step 995). (These steps 992 - 995 may be omitted if it is not required for users to acknowledge acceptance before receiving a data message).

The interface unit 53,148 then replaces the address header (the IMSI) 902 in the original data message with a code 912 identifying the terminal 201 and encapsulates the message in a form suitable for transmission over the packet data network 9 to the aircraft (step (996), with an address header 910 to send it to the data network interface 28, 204 serving the onboard entertainment system 200. It can thus be transmitted to the interface 28, 204 over the packet data network 9 (step 997), effectively as a packet with an address header 910 and a payload made up of the at-seat terminal number 912 and true payload 901 (Figure 9b).

On receipt of the data message, the on board data interface 28, 204 extracts the data message payload 901, 912, (Figure 9c) (step998) and identifies the individual at-seat terminal 201 identified by the address 912. It can then cause display of the data message payload 901 on the screen 201 of the appropriate terminal (step 999).

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If password protection is required, for example to ensure that the user is present when the message is displayed, the payload 901, 912 can also include a password code 913, which causes the interface 28, 204 to withhold the remainder of the payload until a predetermined sequence of keystrokes has been entered by the user in the terminal 201.

In the embodiment of Figures 11 and 12 it is arranged that the MSC 141 has similar features to those described for the MSC 50 and described with reference to Figure 9 and 10. the invitation (step 992) is sent as a voice message to the user terminal 110, and prompts the user to identify his at-seat terminal (in practice the user will be asked for his seat number), either by key presses (using DTMF coding) or by voice (step 995). The acceptance step is therefore performed over the voice network, rather than the data network. The MSC uses this information to generate an AES code identifying the user terminal, to be applied to the data message 910 (Figure 9). The host MSC may store this code for use with subsequent data messages, allowing the host MSC 141 to process further data messages without requesting this information from the user again. The request for the user's seat number may instead be made when he first registers his telephone 110 with the onboard MSC 116.

As the termination is itself mobile, being on board an aircraft, call routing to that termination may require revision from time to time. For example, the "Inmarsat" satellite system comprises several geostationary satellites, which each provide cover for part of the earth's surface. These areas of coverage overlap to a large extent, but nevertheless on a long flight the aircraft may pass out of the area covered by one satellite into that served by another. This causes a small but significant change in the network address of any satellite terminal on board the aircraft. The aircraft location register 41 monitors the identity of all aircraft currently being handled by each ground station 4. When it an aircraft location is updated, it sends an instruction to the interface unit 5, 148. The call diversion instruction unit 56, 146 responds by transmitting a new call diversion instruction to the VLR 51,144 so that any further incoming call attempts are diverted to the new network address of the terminal. Note that the diversion store 57,147 is not updated. Note also that this does not affect calls already in progress: there is usually sufficient overlap in coverage areas that handover from one satellite or base station to another can be arranged to take place when no call is in progress.

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Figure 15 shows a process for intercepting calls when the onboard system 2, 101 is switched off at times when its operation could interfere with conventional land-based cellular systems or with electronic control systems of the vehicle, to enforce "quiet" periods on board, or to allow transfer of the satellite link from one satellite to another. The control to switch the system off may be performed manually or under the control of a sensor detecting interference from nearby radio base stations 74, or an operational condition of the vehicle, such as deployment of the aircraft undercarriage, low altitude, or "weight on wheels", communicated to the onboard system by means of the control data bus 22. When such a disconnection occurs (step 1501), a signal is generated in the onboard system 2, 101 (step 1502) for transmission over the satellite link 6 to the ground station 4 (step 1503). This signal causes the satellite ground station to invoke a call failure mode for any call directed to the onboard system 2, 101 of the specified vehicle (step 1504).

Any call now diverted by the MSC 70, 141 to a number corresponding to a node on board the vehicle (step 1505) will then receive a "call failed" indication from the ground station (step 1506), without any signalling required over the satellite link 6, 206, 406, 506. Such failed calls will be re-routed according to the user's own diversion instructions, stored by the host MSC 50, 141, 241, 470, 541 for use when the user's handset is busy (step 1507). Generally, such instructions will be to divert the call to a voicemail system in the user's home network. In addition, the host MSC 50, 141, 241, 470, 541 will record the existence, and possibly the origin (Calling line identity – CLI) of any such call attempts (step 1508).

When the onboard system 2, 101 is re-activated (step 1511) a further signal is transmitted by the onboard system (step 1512) for transmission over the satellite link 6 to the ground station 4 (step 1513). This signal causes the satellite ground station to revoke the call failure mode for calls directed to the onboard system 2, 101 of the specified vehicle (step 1514). When a user 25, 110 reconnects to the onboard system 2, 101 (step 1515) the onboard system transmits a signal to the host MSC 70, 141 (step 1516) which causes the host MSC to retrieve the call attempt record previously stored for that user (step 1518). If one or more such call attempts have been made, the MSC returns a message to the user 25, 110 (step 1519), prompting the user to retrieve his messages from the voicemail system should he so wish.

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CLAIMS

1. A method of converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, the conversion being such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, wherein the address information in the original data message is replaced by address information appropriate to the selected display unit to generate an amended data message, and a new data message is created, addressed to the server of the information display system and having the amended data message as payload, and wherein the server converts the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

2. A method according to claim 1, wherein the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset.

3. A method according to claim 1, wherein the data message is generated by the cellular switching system in response to a message being deposited in a call answering system.

4. A method according to any preceding claim, wherein prior to transmission of the amended original data message to the server an alerting data message is created, indicative of the presence of the original data message, addressed to the server of the information display system, and carrying address information appropriate to the selected display unit, thereby causing the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and wherein the amended original data message is forwarded to the server in response to an instruction from a termination point associated with the destination display unit.

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5. A method according to any preceding claim, wherein the amended data message includes password data, and wherein when the server receives a data message it causes the display means to indicate the presence of a data message, and displays the data message only if it receives a predetermined input from a user terminal associated with the display means.

6. Apparatus for converting data messages originally formatted for transmission over a first telecommunications network for generation of a display on a display unit of a first type, such that messages can be transmitted over another telecommunications network for display by a selected display unit of a second type forming part of a server-based information display system, the apparatus comprising

means for replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message,

means for creating a new data message addressed to the server of the information display system and having the amended data message as payload.

7. Apparatus according to claim 6, comprising

means for creating an alerting data message indicative of the presence of the original data message, addressed to the server of the information display system, the alerting message carrying address information appropriate to the selected display unit to cause the server to generate control instructions suitable to display an alerting message on the information display unit so identified, and

means for forwarding the amended original data message to the selected server in response to an instruction from a termination point associated with the destination display unit.

8. Apparatus according to claim 6 or 7 further comprising means to generate password data.

9. Server apparatus forming part of a server-based information display system for receiving messages generated by the apparatus of claim 6, 7 or 8, for display by a selected display unit, the server comprising means for converting a data message

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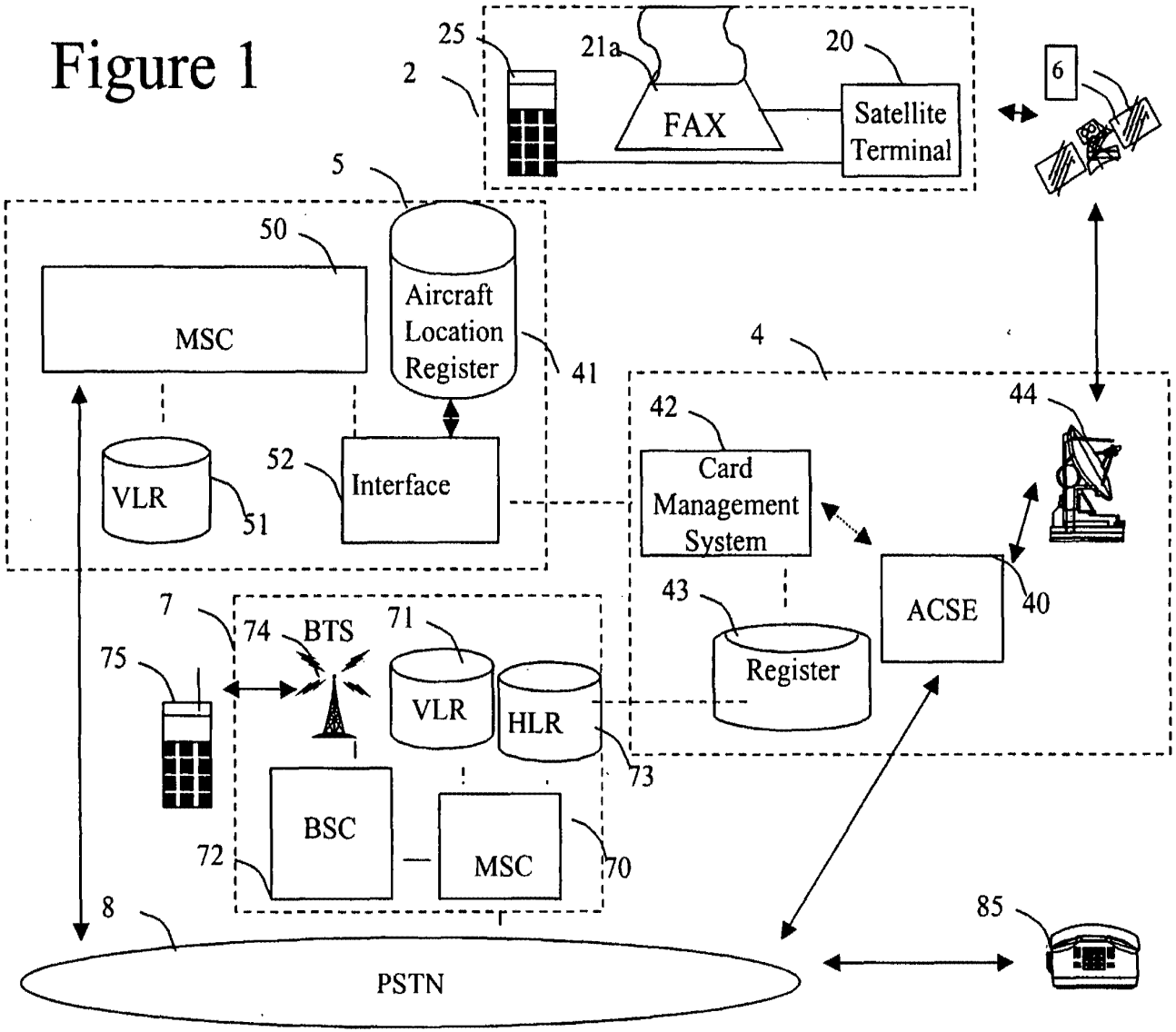
formatted for display on a display unit of a first type into control instructions suitable to display the information content of the data message on an information display unit of a second type controlled by the server, the information display unit being identified in the data message

10. Apparatus according to claim 9, comprising means to cause the display means to indicate the presence of a data message, and means responsive to a predetermined input from a user terminal associated with the display means to display the data message, the predetermined input being a password associated with the data in the data message.

11. Apparatus according to any of claims 6 to 10, wherein the data message is originally formatted for transmission over a cellular telephone network for display by a cellular telephone handset.

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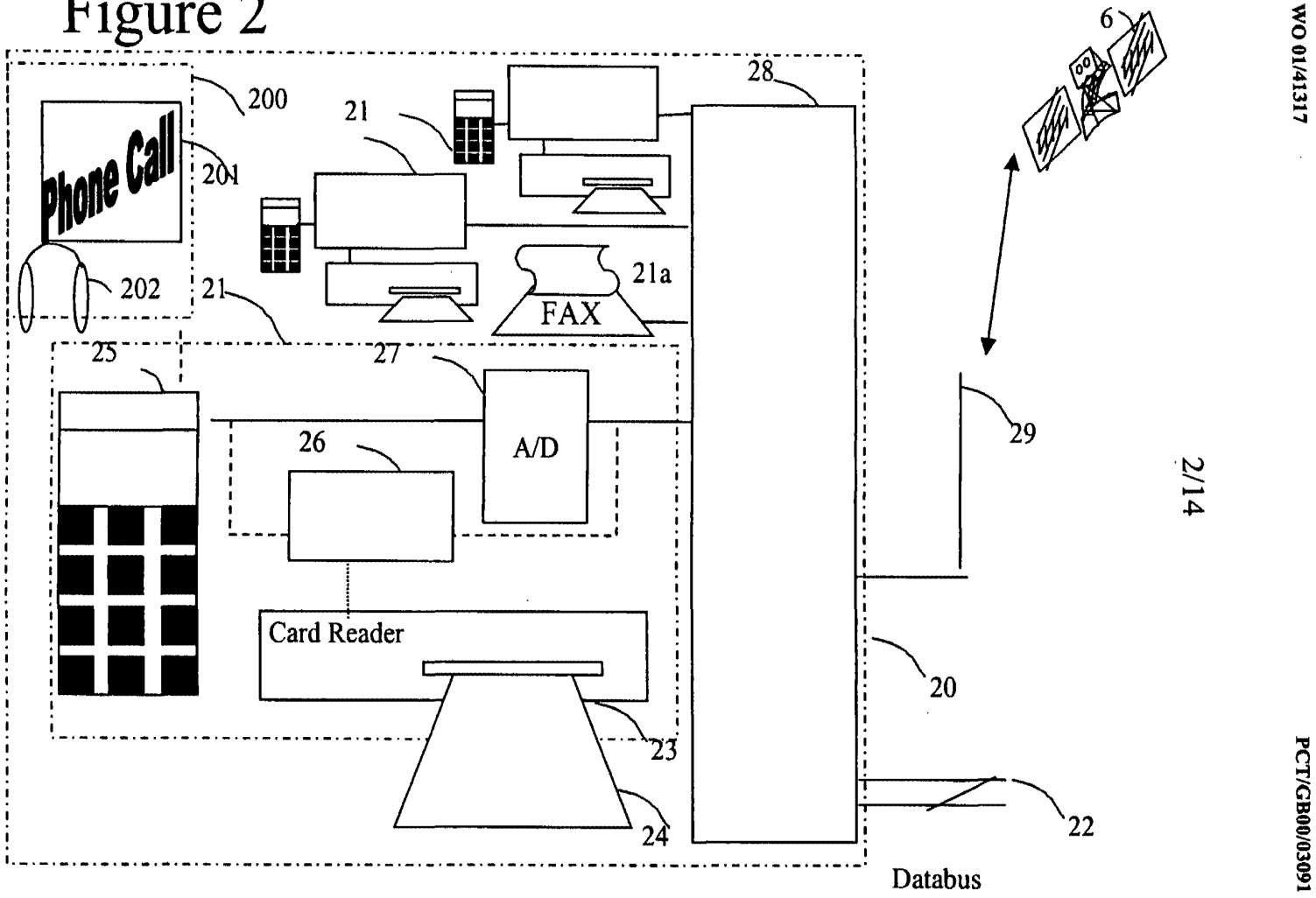
Figure 1



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PCT/GB00/03091

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Figure 2



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Figure 3

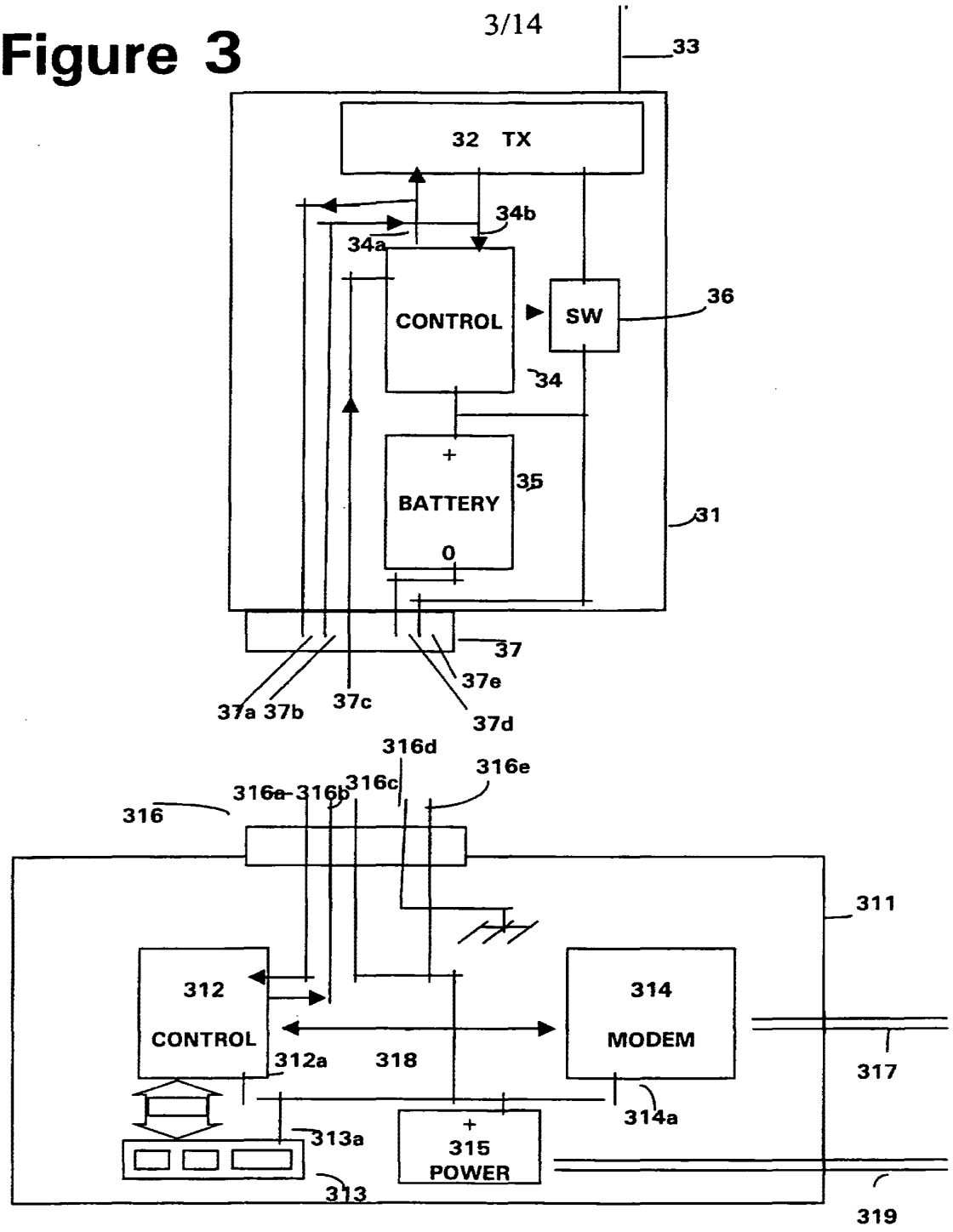

33
32 TX
34b
34a
CONTROL
SW
36
34
+
BATTERY
0
35
31
37
37e
37a
37b
37c
37d
316d
316e
316a
316b
316c
316
311
312
CONTROL
312a
318
314
MODEM
317
314a
313a
+
315
POWER
313
319

Figure 4

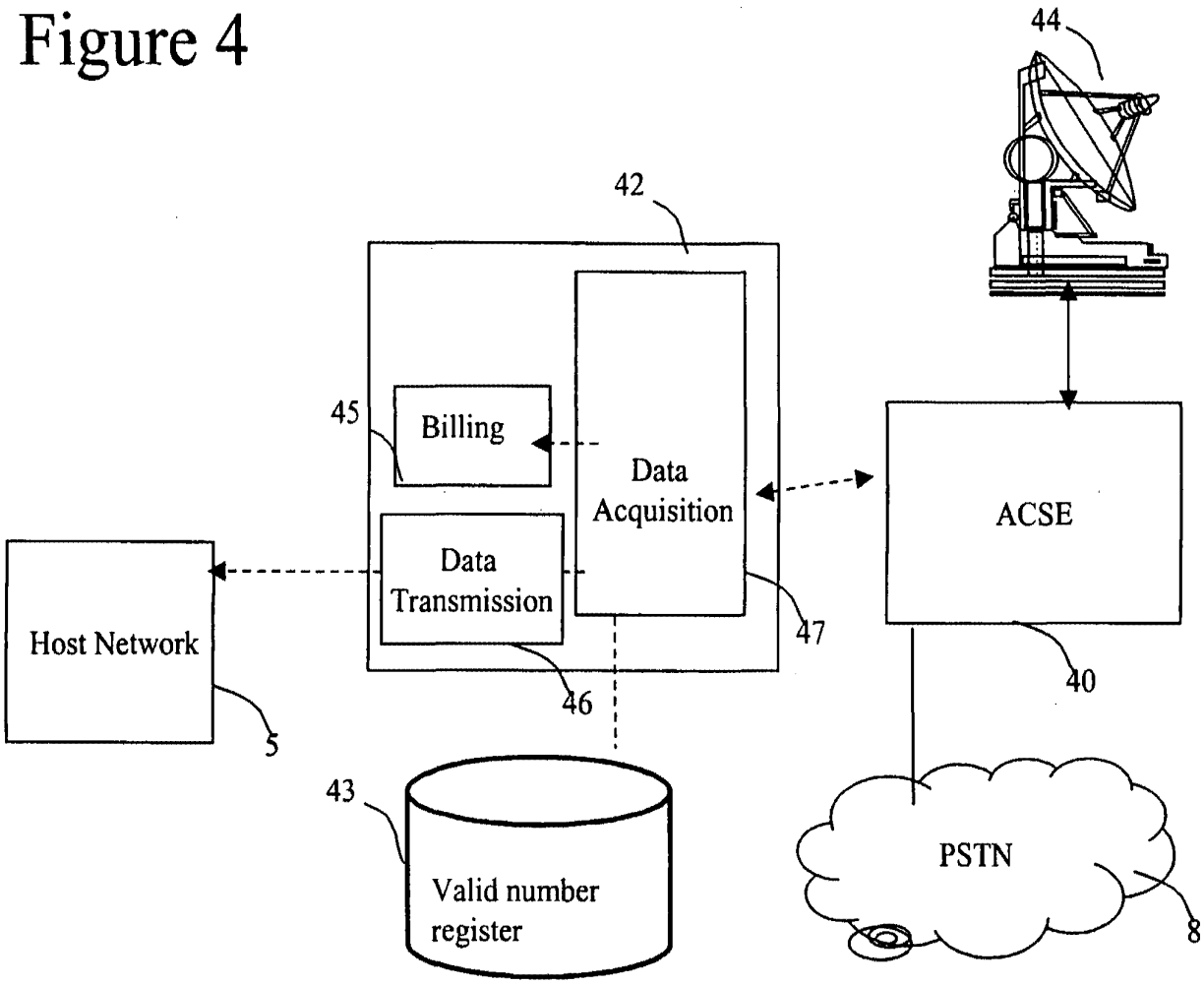
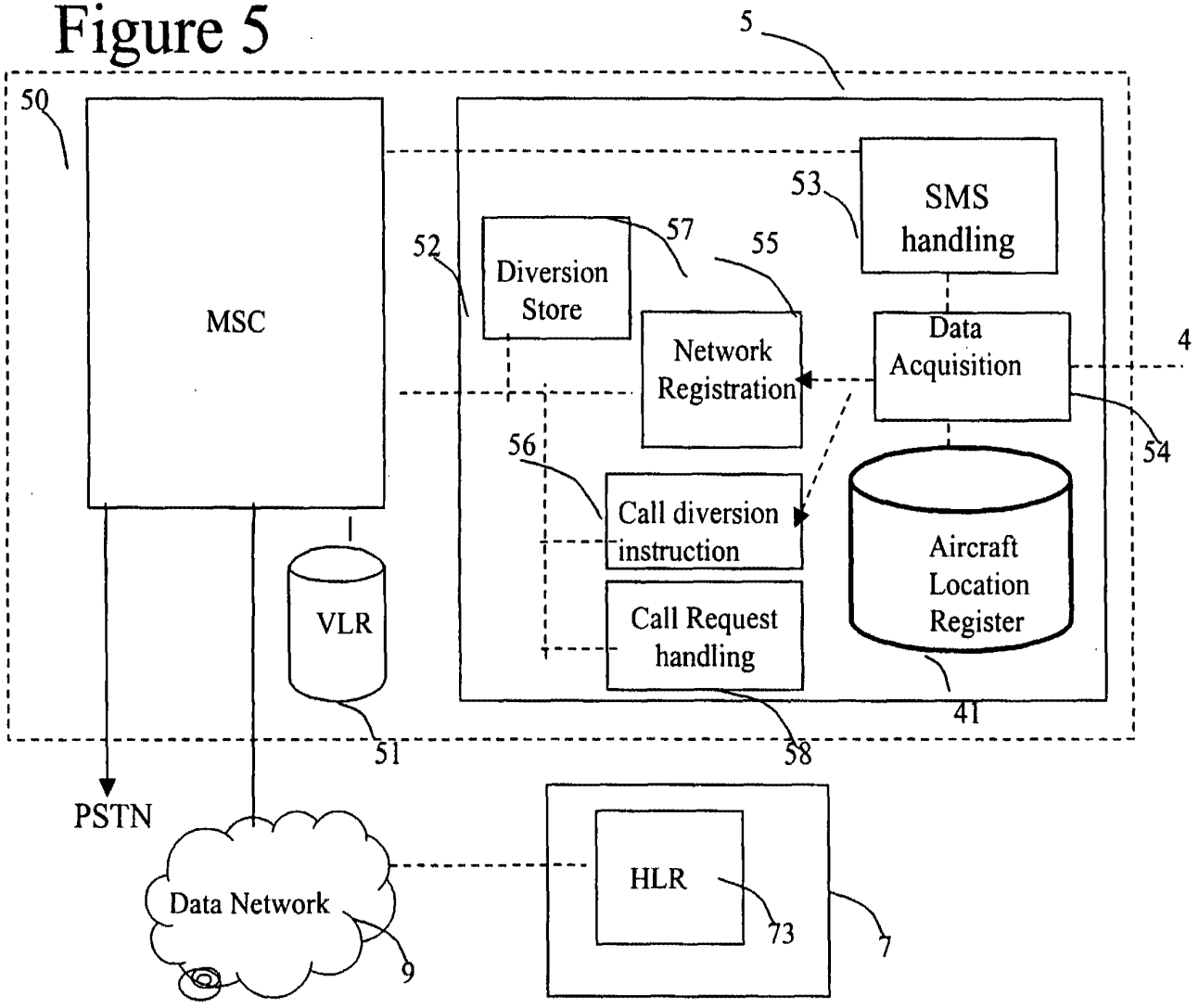

44
42
45
Billing
Data
Acquisition
ACSE
Data
Transmission
Host Network
47
46
40
5
43
Valid number
register
PSTN
8

Figure 5


5
50
MSC
53
SMS handling
52
Diversion Store
57
55
Network Registration
Data Acquisition
4
54
56
Call diversion instruction
Aircraft Location Register
Call Request handling
41
VLR
51
58
PSTN
Data Network
9
HLR
73
7

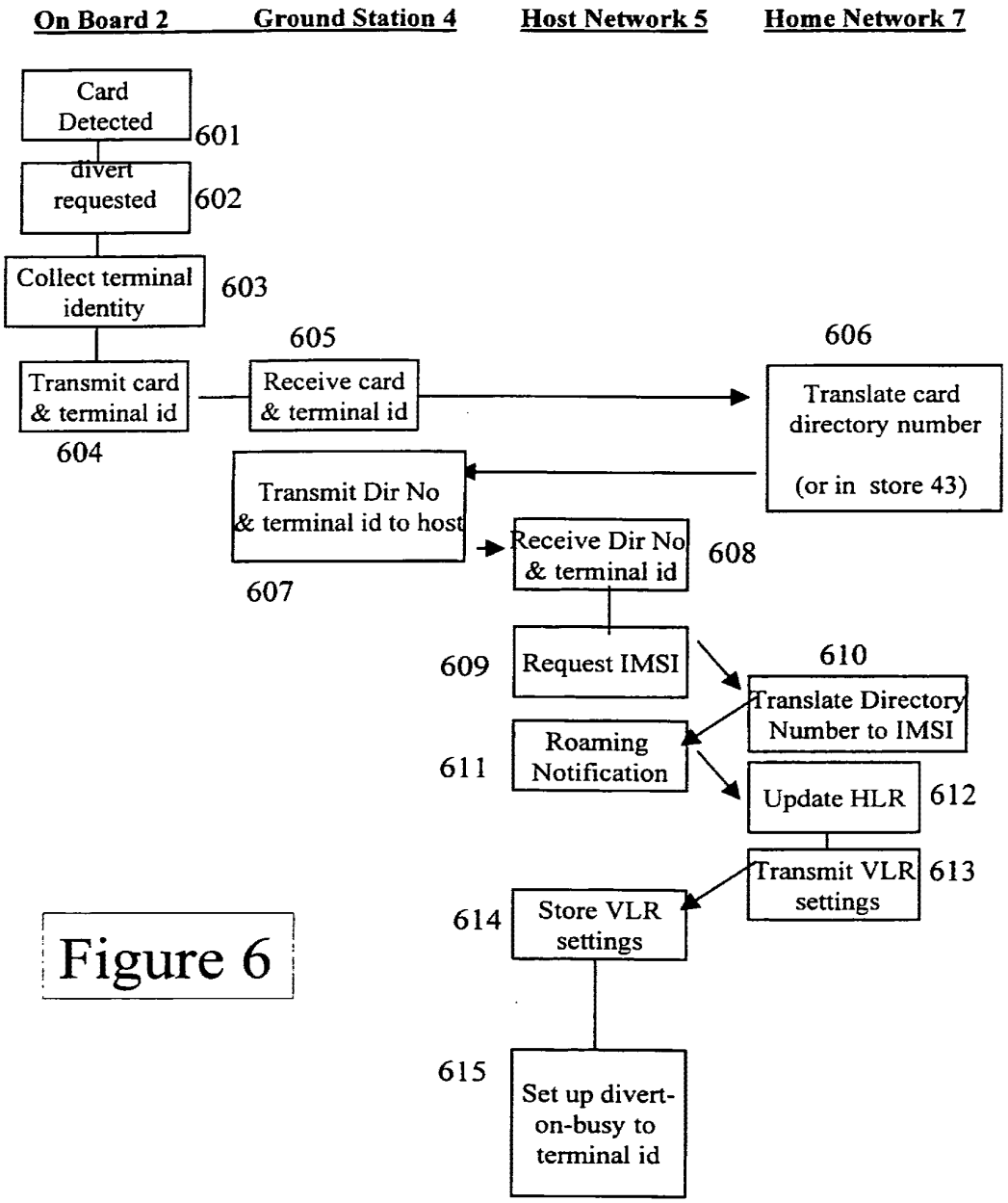

On Board 2
Ground Station 4
Host Network 5
Home Network 7
Card Detected
601
divert requested
602
Collect terminal identity
603
Transmit card & terminal id
604
605
Receive card & terminal id
606
Translate card directory number
(or in store 43)
Transmit Dir No & terminal id to host
607
Receive Dir No & terminal id
608
609
Request IMSI
610
Translate Directory Number to IMSI
611
Roaming Notification
Update HLR
612
Transmit VLR settings
613
614
Store VLR settings
615
Set up divert-on-busy to terminal id

Figure 6

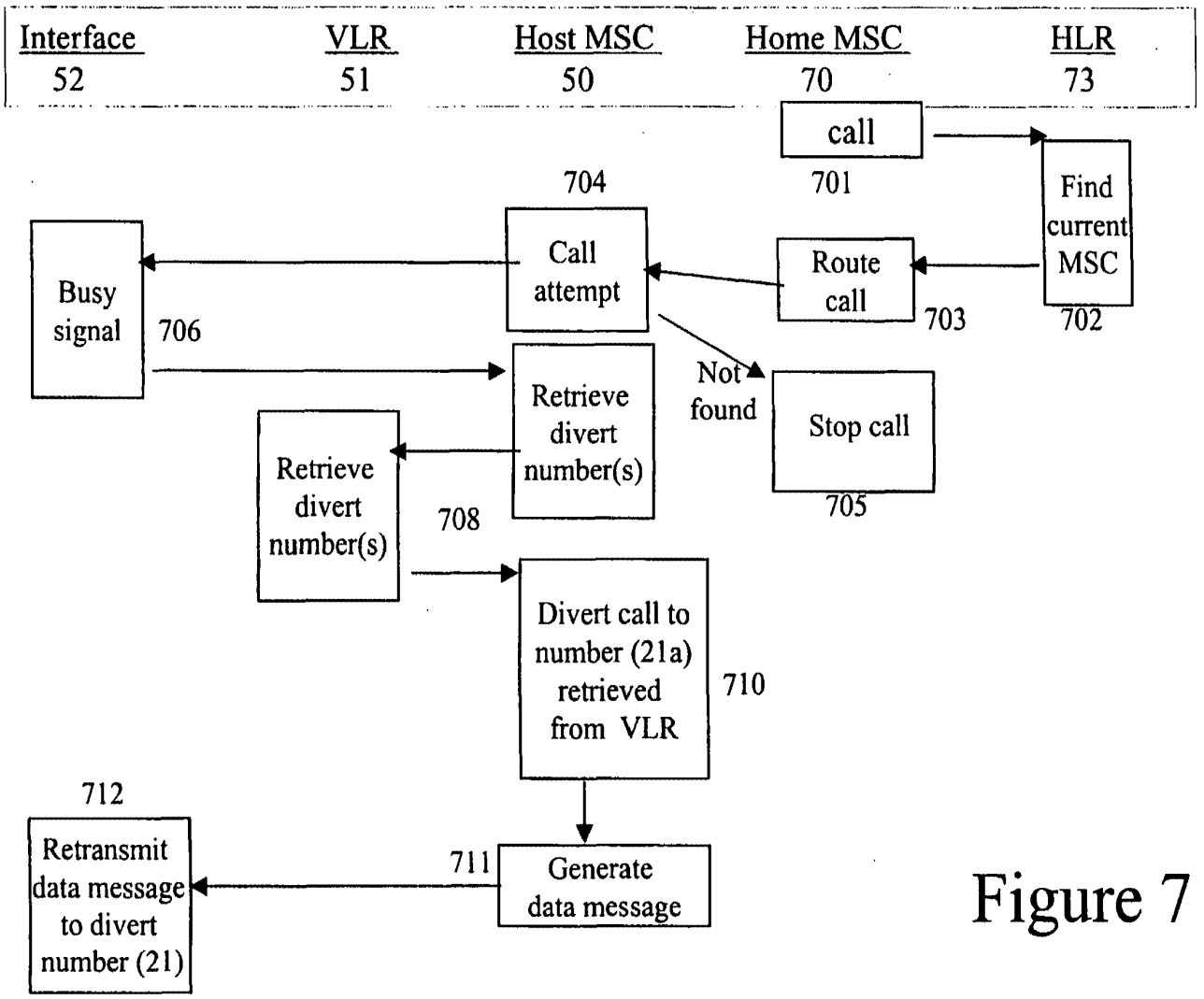

Interface
52
VLR
51
Host MSC
50
Home MSC
70
HLR
73
call
701
Find current MSC
702
Route call
703
Call attempt
704
Busy signal
706
Retrieve divert number(s)
Not found
Stop call
705
Retrieve divert number(s)
708
Divert call to number (21a) retrieved from VLR
710
712
Retransmit data message to divert number (21)
711
Generate data message

Figure 7

Figure 8

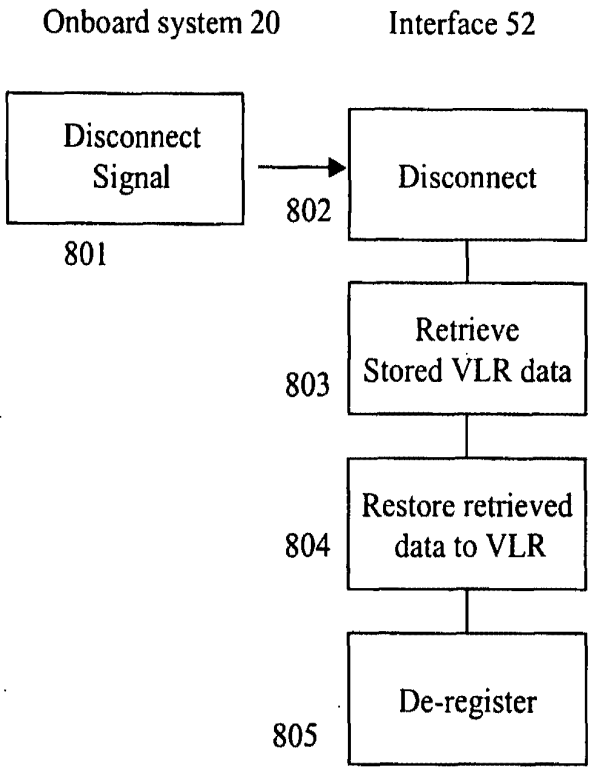
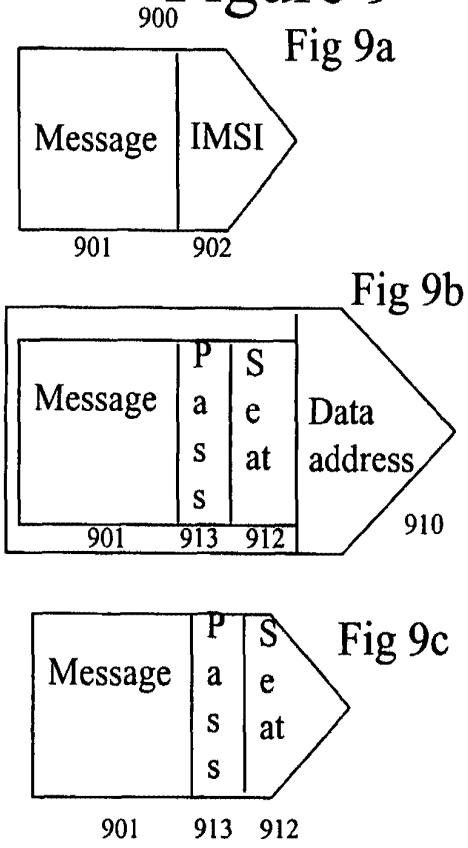


Figure 9



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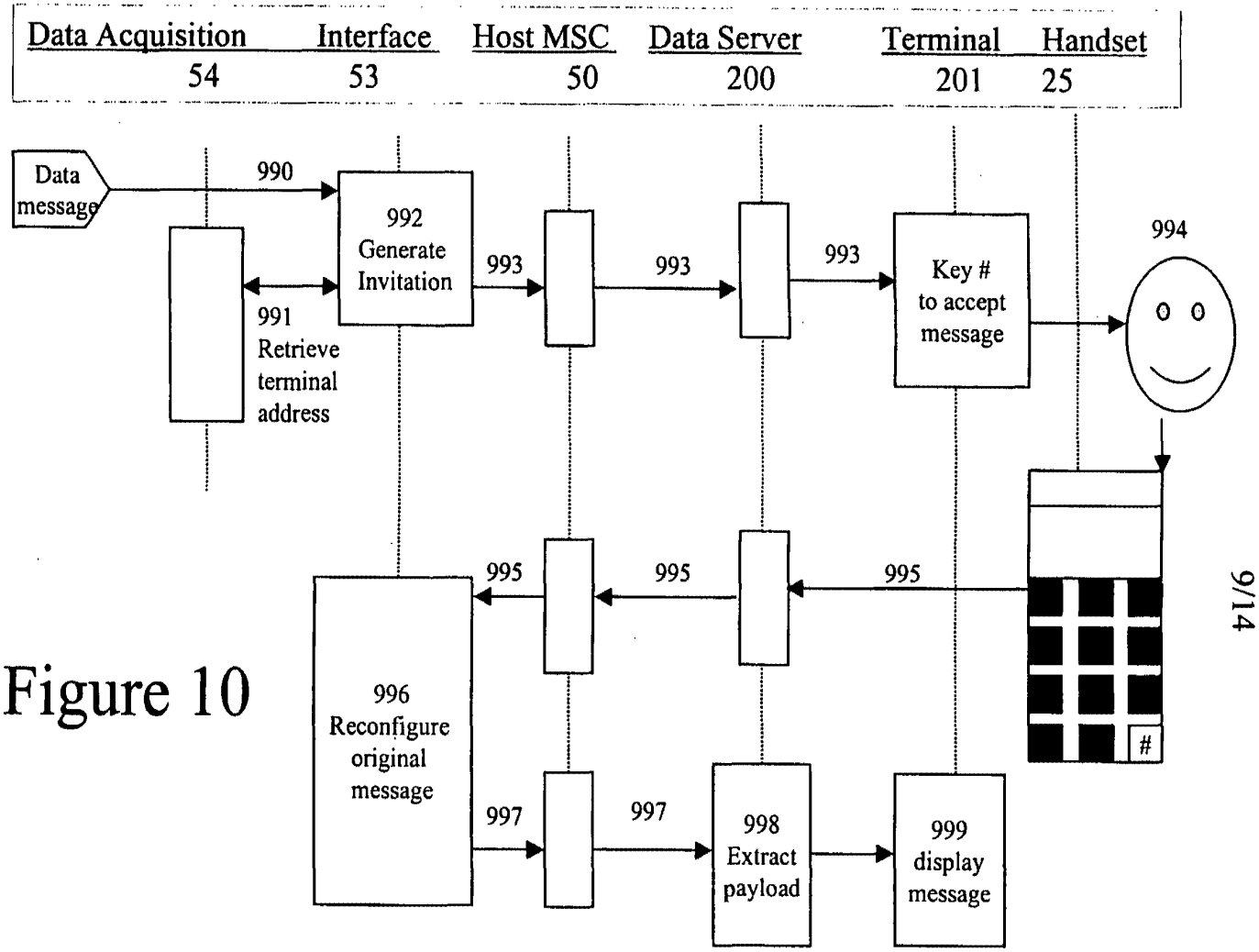

Data Acquisition
54
Interface
53
Host MSC
50
Data Server
200
Terminal
201
Handset
25
Data message
990
992
Generate Invitation
991
Retrieve terminal address
993
993
993
Key # to accept message
994
995
995
995
996
Reconfigure original message
997
997
998
Extract payload
999
display message
#

Figure 10

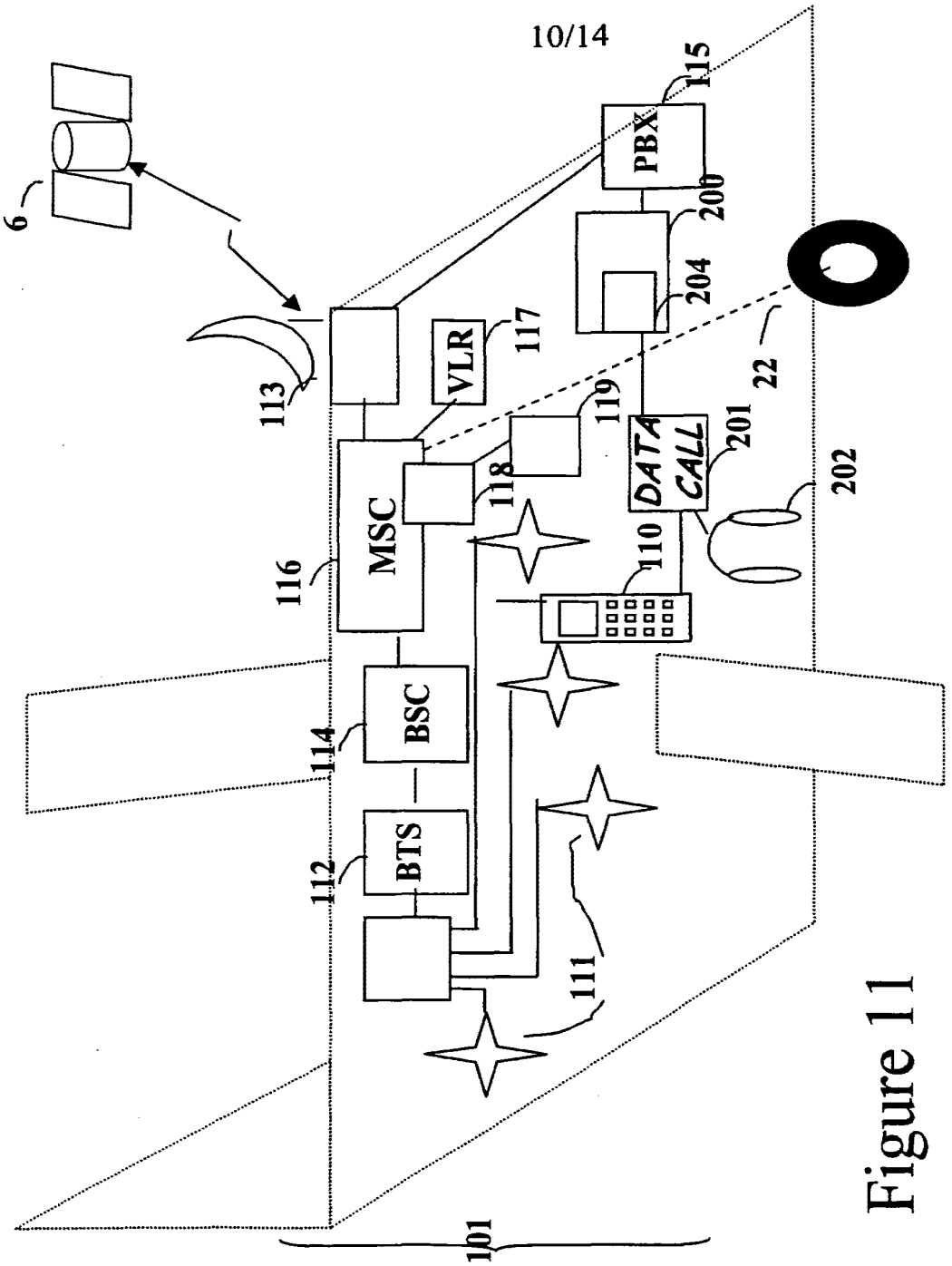
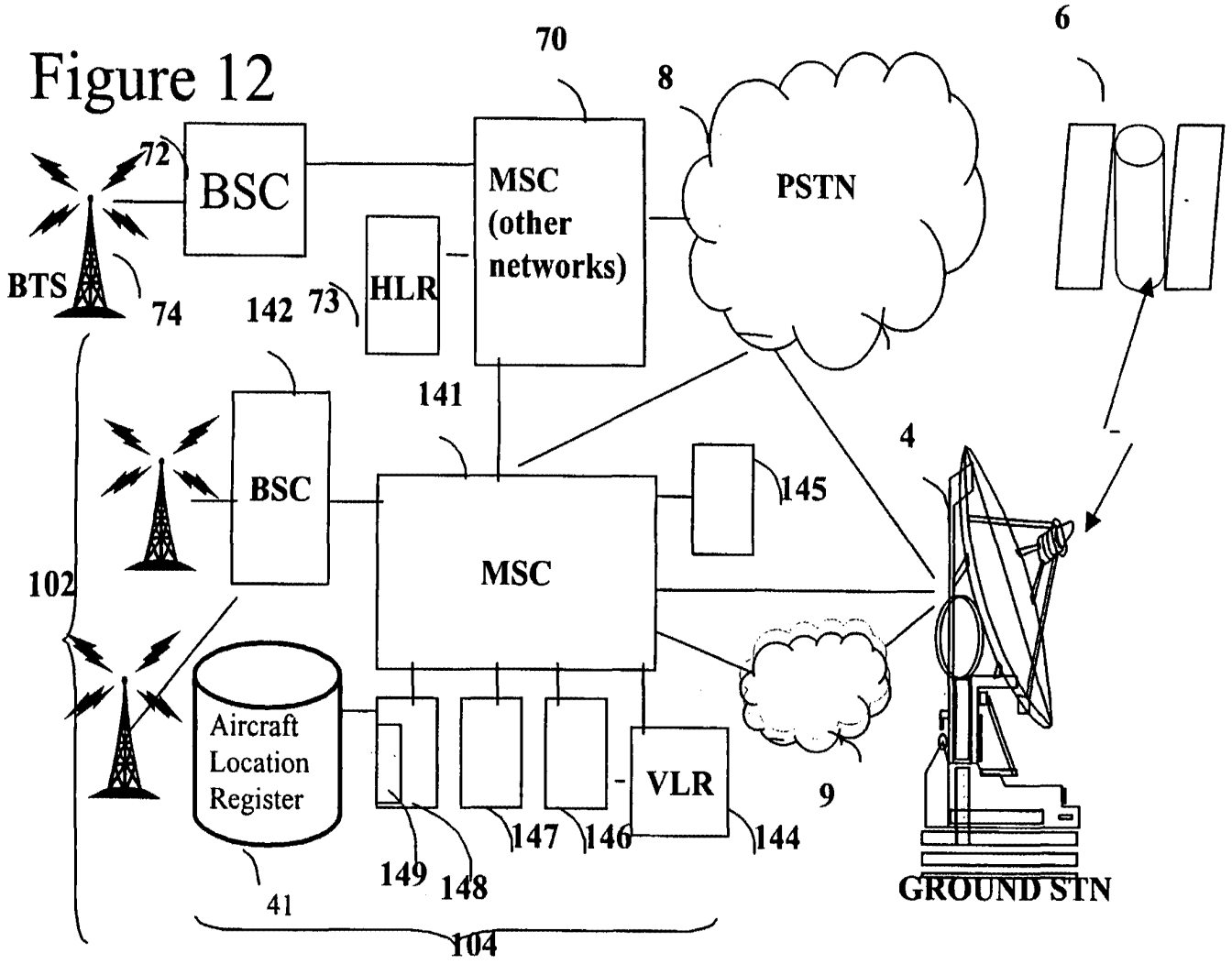

6
113
VLR
117
119
118
MSC
116
BSC
114
BTS
112
111
101
PBX
115
200
204
22
DATA CALL
201
202
110

Figure 11

Figure 12



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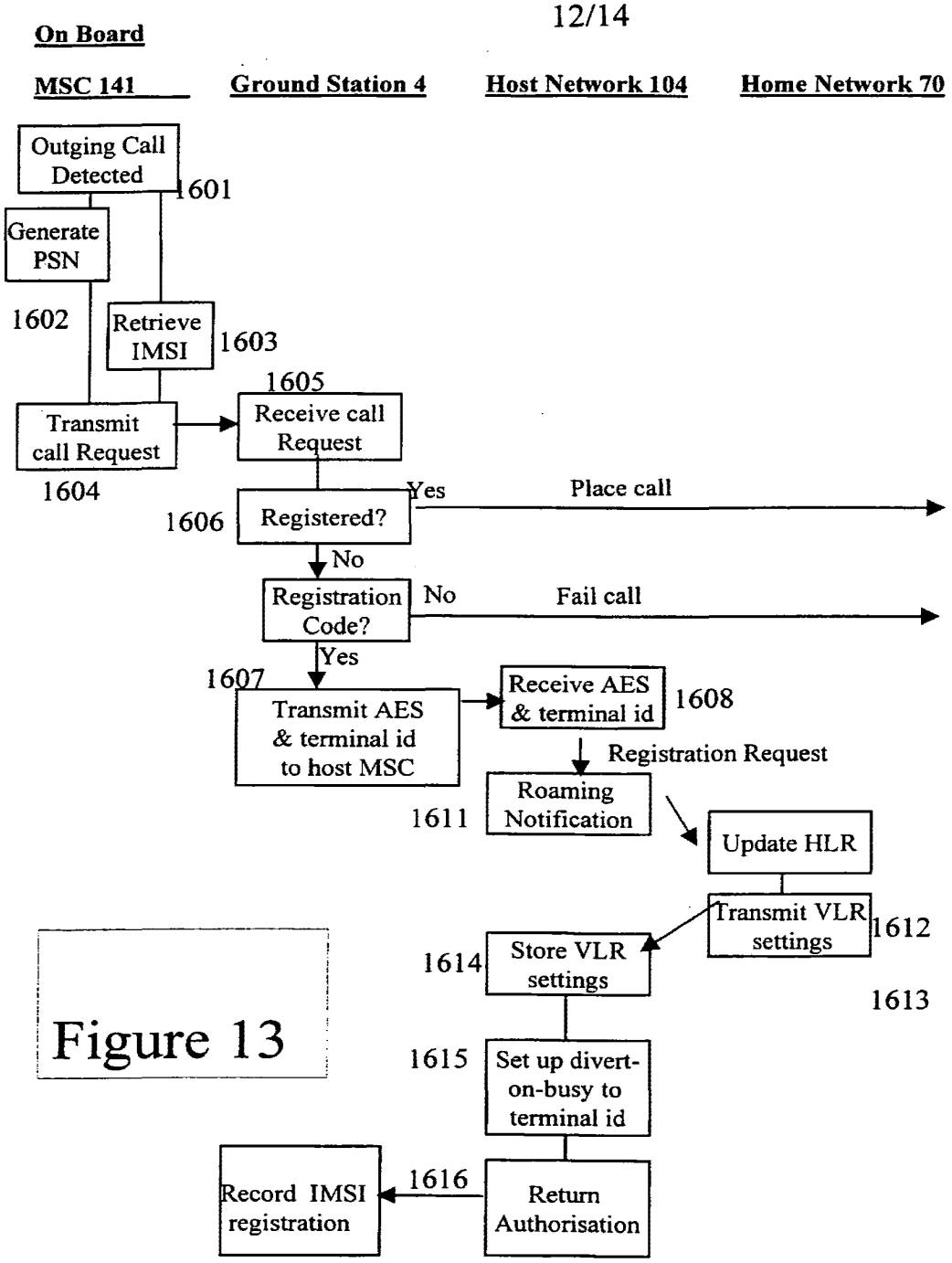

On Board
MSC 141
Ground Station 4
Host Network 104
Home Network 70
Outging Call Detected
1601
Generate PSN
1602
Retrieve IMSI
1603
1605
Transmit call Request
1604
Receive call Request
Registered?
1606
Yes
Place call
No
Registration Code?
No
Fail call
Yes
1607
Transmit AES & terminal id to host MSC
Receive AES & terminal id
1608
Registration Request
Roaming Notification
1611
Update HLR
Transmit VLR settings
1612
1613
Store VLR settings
1614
Set up divert-on-busy to terminal id
1615
Record IMSI registration
1616
Return Authorisation

Figure 13

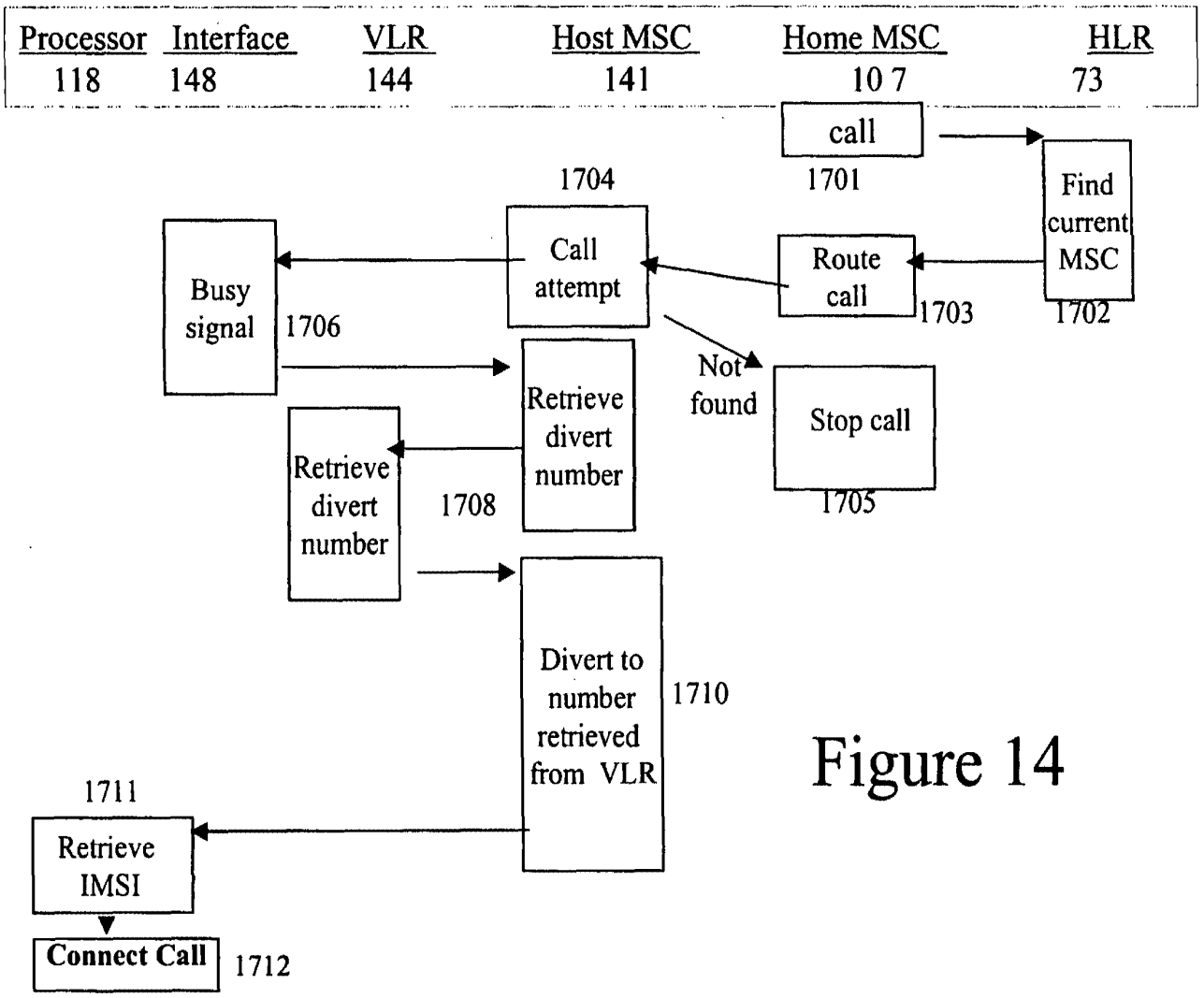
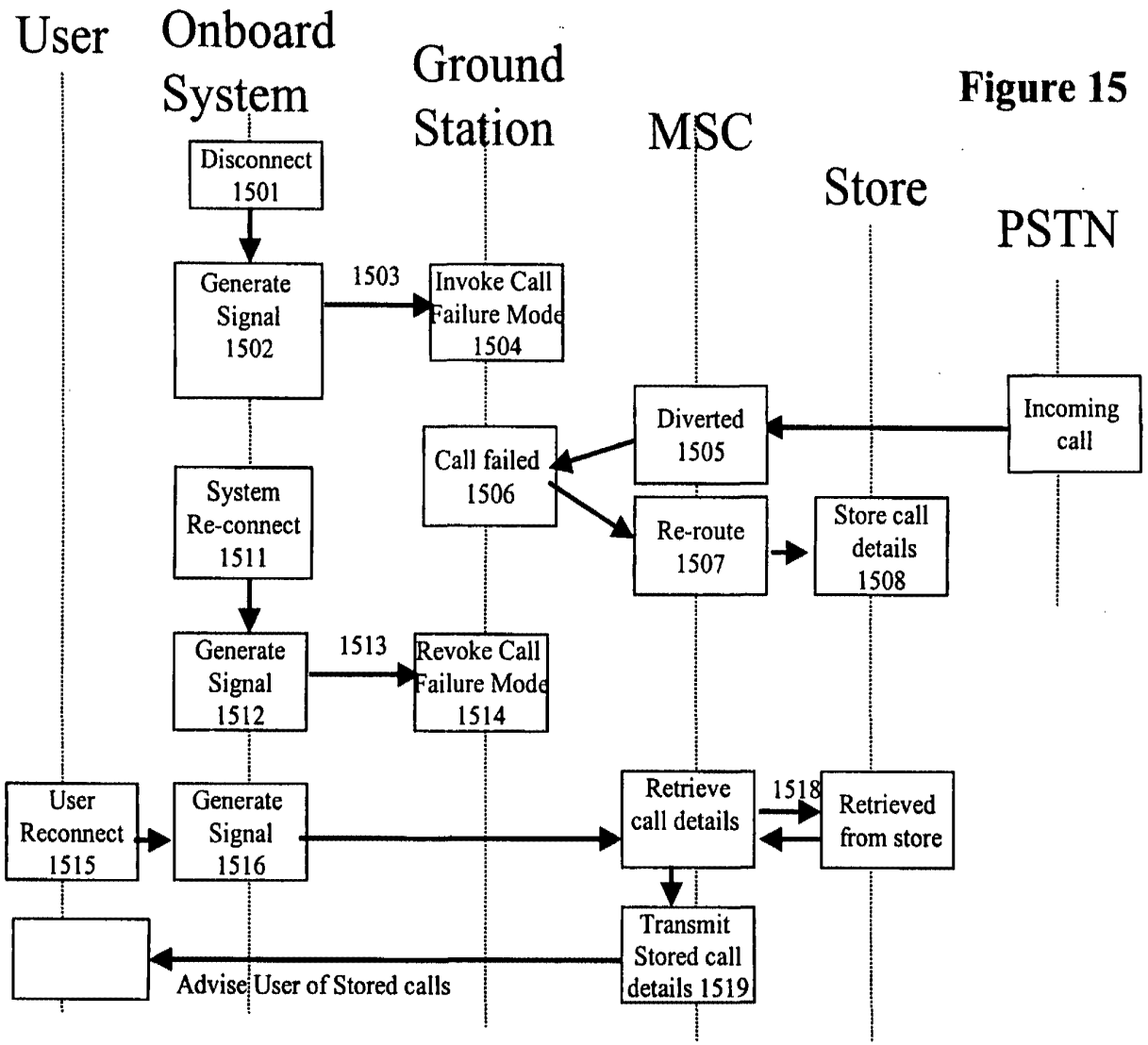


Figure 14

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Figure 15


User
Onboard System
Ground Station
MSC
Store
PSTN
Disconnect 1501
Generate Signal 1502
1503
Invoke Call Failure Mode 1504
Diverted 1505
Incoming call
Call failed 1506
System Re-connect 1511
Re-route 1507
Store call details 1508
Generate Signal 1512
1513
Revoke Call Failure Mode 1514
User Reconnect 1515
Generate Signal 1516
Retrieve call details
1518
Retrieved from store
Transmit Stored call details 1519
Advise User of Stored calls

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(71) Applicant *(for all designated States except US)*: **STRATOS GLOBAL LIMITED** [GB/GB]; 6th Floor, Finsbury Square, London EC2A 1AE (GB).

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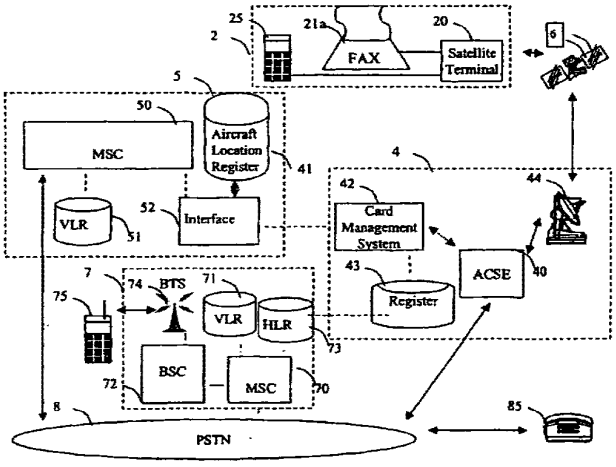
(74) Agent: **SKONE JAMES, Robert E.**: Gill Jennings & Every, Broadgate House, 7 Eldon Street, London EC2M & LH (GB).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: CALL DIVERSION SYSTEM



(57) Abstract: An interface (52) is provided between a satellite telephone system (4) and a cellular telephone system (5) for allowing calls to a user's cellular telephone to be diverted to a satellite telephone handset (25) when the user is unable to use his cellular telephone, for example when on board an aircraft (2) fitted with a satellite telephone system (20). The user inserts a card (which may be the SIM of his mobile phone, or a card compatible with existing satellite telephone equipment) into a suitable reader in the satellite telephone (20), which causes the satellite ground station's card verification system (42) to connect to a host cellular network (50). The host cellular network has an interface unit (52) which emulates the operation of a normal base station, so that the host cellular system (50) acts as if the mobile user's terminal is roaming on the host network, but is currently "busy". The interface (52) also resets the user's existing call diversion instructions so that when the host cellular system (5) receives a busy tone from the base station emulator (52), it routes calls to the directory number of the terminal (20). Data messages originally formatted for transmission over the cellular telecommunications network for generation of a display on a display unit of a cellular telephone, can instead be transmitted over the satellite network for display on the information and entertainment system of the aircraft by replacing the address information in the original data message by address information appropriate to the selected display unit to generate an amended data message. A new data message is created, addressed to the server of the information display system and having the amended data message as payload. The onboard server has means for converting the amended data message into control instructions suitable to display the information content of the data message on the information display unit identified in the amended data message.

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— *with international search report*

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IN. ERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/03091

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F3/14 H04B7/185

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F H04B B64D H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 37500 A (BRITISH TELECOMM ;TITMUSS RICHARD JOHN (GB); WINTER CHRISTOPHER SI) 9 October 1997 (1997-10-09) abstract page 2, line 7-17 page 3, line 16-28 page 12, line 12 -page 13, line 7 page 15, line 14 -page 16, line 26 page 27, line 3 -page 28, line 4 claims --- -/--	1-3,5,6, 8-11

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
5 October 2000	12/10/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Dejonghe, O

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/03091

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 774 514 A (SPRENGER WILFRIED ET AL) 27 September 1988 (1988-09-27) abstract column 1, line 62-66 column 2, line 3-18 column 2, line 39-50 column 3, line 13-60 claims	1,6,9
A	WO 98 26521 A (ERICSSON TELEFON AB L M) 18 June 1998 (1998-06-18) abstract column 3, line 21 -column 5, line 15 column 9, line 1-20	1,6,9
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A	US 5 963 877 A (KOBAYASHI HIRONORI) 5 October 1999 (1999-10-05) abstract column 1, line 50-62 column 5, line 15-33 column 7, line 24-54 claims	4,7

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Information on patent family members

International Application No
PCT/GB 00/03091

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		BR 9713885 A	29-02-2000
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US 5963877 A	05-10-1999	AU 6242698 A	25-08-1998
		WO 9834387 A	06-08-1998

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(9)

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60/398,077 25 July 2002 (25.07.2002) US
10/347,388 21 January 2003 (21.01.2003) US

(71) Applicants and
(72) Inventors: **SHMUELI, Oded** [IL/IL]; 178 Hapisga, 36 001 Nofit (IL). **YEHEZKEL, Benny** [IL/IL]; 74 Bialik Street, 52 441 Ramat Gan (IL).

(74) Agent: **G. E. EHRLICH (1995) LTD.**; 11 Menachem Begin Street, 52 521 Ramat Gan (IL).

(81) Designated States *(national)*: AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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— *without international search report and to be republished upon receipt of that report*

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(54) Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

(57) Abstract: Rerouting apparatus for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

WO 2004/012026 A2

ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

Field and Background of the Invention

The present invention relates to routing of data including multimedia between electronic devices, and more particularly but not exclusively to rerouting of incoming communications that may or may not include multimedia to devices other than the initial receiving device. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional.

With the introduction of mobile communication devices, telecommunications technology has transformed society over the past decade. The ability to communicate almost anywhere, anytime, with few geographical limitations has resulted in a society, in both social and business contexts, which is almost always on-line. Mobile communication devices today typically have data processing ability which allows them to handle multi-media, and different types of devices are today able to communicate with each other, either directly via a permanent or temporary link or indirectly via a network. Thus data, including multimedia, can be directed or routed from one device to another device. The idea of multi-media routing stems from the myriad of opportunities which present themselves in routing signals from one device or kind of device to another. However, in general, the playing of multimedia data is limited , at least in the short term, to the device on which it is received, or to those in which the data originates. This limitation can be a considerable limitation on the user's ability to enjoy the multimedia since different devices have very different capabilities regarding the playing of multimedia.

The media playing devices considered specifically in the present disclosure include both mobile devices (cell phones, PDA's, handheld devices, etc.) and non-mobile devices (land/fixed line phones, computer monitors, Hi-Fi sets, speakers, etc.). Some of the devices may be used for just one or two media types and others are more general in their applicability, which is to say it is possible to use the devices in different modes for playing several media types: voice, text, images, and video. Likewise, the devices are used in various locations: at the office, home, car, hotel room, plane, outdoors, etc.

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Most current mobile devices in particular provide relatively poor multi-media capabilities including digital audio, image, and/or video capabilities (as well as other media capabilities) in comparison with other existing devices such as land/fixed line phones, computer monitors, TV screens and Hi-Fi sets. Compared to high quality media playing equipment, even 3rd generation mobile devices (3G) are of inferior quality.

A number of patent applications discuss rerouting of communications from one communication unit to another. An example is GB 2,370,451, which discloses a communication unit that detects the presence in its vicinity of a second communication unit and determines its identity. If the identity is found to be of a predetermined set (*e.g.* of communication units having the same owner) calls made to the second communication unit are diverted to the first unit. The arrangement is useful where a user has multiple communication units, for example a car telephone and a cellular handset, with differing telephone numbers as the user may be contacted using any of these.

WO0141317A3: call diversion system, discloses a system specifically for redirecting calls between satellite and terrestrial cellular systems. The disclosure addresses the issue of reformatting data messages for the transition.

Neither of the above systems takes into consideration the types of multimedia content of the incoming calls data or playing quality and usage comfort when deciding whether to redirect, and redirection is based on devices having a shared ownership or otherwise being part of a predetermined set. In the above-described systems the user typically has only limited control over rerouting. Nevertheless, it would be highly advantageous to provide the user with the ability to select a target device, based on the type of multimedia content, and furthermore to choose a device for play or storage of the content independently of the initially targeted or originating device.

Summary of the Invention

According to a first aspect of the present invention there is thus provided data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

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a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

The apparatus preferably further comprises a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

Preferably, said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

Preferably, a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

The apparatus preferably further comprises a media cloner for making multiple copies of the data, in particular but not exclusively an incoming communication, thereby to enable said apparatus to redirect, for example, a single incoming communication to a plurality of locations.

Preferably, said announcer is an active device, operable to transmit at least status information to respective surroundings.

Preferably, said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

Preferably, said passive device further carries status information of said device.

Preferably, said announcer comprises a barcode and wherein said scout is a barcode reader.

The apparatus preferably further comprises an outgoing multimedia transmitter for directing rerouted media directly to a selected device.

The apparatus preferably further comprises control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

The apparatus preferably comprises control functionality operable to carry out said rerouting directly.

The apparatus preferably comprises control functionality operable to carry out said rerouting through locally available network infrastructure.

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The apparatus preferably comprises a device database for storing compatibility data of different equipment types.

According to a second aspect of the present invention there is provided a method of rerouting data comprising:

Receiving or generating said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

The method preferably comprises determining compatibility of said available devices in said vicinity with said communication.

The method preferably further comprises carrying out media type transformation from a media type of said data to a media type compatible with a selected device.

The method preferably further comprises carrying out selection between devices found to be available, via a user interface.

The method preferably further comprises carrying out a selection between devices found to be available, based on a predetermined user profile.

The method preferably further comprises selecting a plurality of devices to reroute said data thereto, and cloning said data for each selected device.

The method preferably further comprises determining availability of other devices in the vicinity of said target device, and

rerouting said data to at least one further target device selected from devices found to be available.

According to a third aspect of the present invention there is provided a data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

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Brief Description of the Drawings

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, purely by way of example, to the accompanying drawings.

With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice. In the accompanying drawings:

Fig. 1 is a simplified diagram showing a plurality of electronic devices in the vicinity of one another, between which communications can be rerouted according to a preferred embodiment of the present invention, and

Fig. 2 is a simplified block diagram showing a preferred apparatus for attachment to an electronic device for allowing the device to support rerouting according to preferred embodiments of the present invention.

Description of the Preferred Embodiments

The capability of routing of multi-media content (possibly including media transformation and multiplication, i.e. cloning) from one device to another may dramatically upgrade media playing quality, and grant the user the liberty to play the content on any device he wishes, preferably the most suitable device available, regardless of the origin of the content or the device to which the content may initially have been directed, or at which the content originates. Furthermore, by rerouting to a more capable device, a user's satisfaction level may be increased in comparison to having to remain with a device that say is limited by inferior data rate, processing power, memory capacity or input/output facilities. For example, a cellular communication device such as a mobile telephone is such a limited capability device which is typically the initial recipient of a communication. Such an initial recipient, or originator, is referred to hereinafter as the routing-source device. Furthermore, as will be explained below, the ability to route content from non-mobile, that is land or

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fixed devices to nearby mobile and other devices permits a range of possibilities for use which is currently not provided for.

For example, the ability to route an incoming phone call, typically comprising voice, from a mobile device to a land/fixed line phone may generally be expected to upgrade the quality of the call. The ability to route hand held calendar content from a mobile device having some digital ability to a computer monitor, may allow for better viewing of the information. Such rerouting may also enhance the user's ability to share the information with other people or with computer applications, for example applications that capture information displayed on the monitor and use it to trigger other events. Such applications can easily be run on a PC or laptop computer but are difficult to run on a mobile telephone for example.

An incoming call or other originating data may be rerouted more than once. In preferred embodiments, individual devices do not need to know whether they are an initial receiving device or a first or subsequent rerouting device, and may treat any arriving communication in the same way.

Furthermore, a preferred embodiment of the present invention provides an ability to route an incoming voice message from say a mobile device or voice mailbox to a facsimile machine or display monitor, combined with a transformation capability – in this case an ability to transform voice to text. Software packages that interpret voice and translate into text are well known and commercially available. Such packages, which presently require training on a specific voice in order to produce reasonable results, may broaden the usage of voice messages. However, even without training, the best packages can produce sufficiently good results to enable say the hard of hearing to make a reasonable interpretation of an incoming voice signal. Thus such a rerouting-while-transforming capability may be highly desirable for people with special needs - impaired senses (hearing, vision) who may use such a capability to receive information in a form more usable to them. Likewise such a capability may be useful for receiving communications in difficult environments such as a noisy factory floor.

As a further example, an incoming phone call directed at a land/fixed line may be rerouted to a mobile device, thus, effectively using the mobile as a cordless phone. Such a technique may ease acceptance of a phone call in a hotel lobby, at a colleague's office, at a restaurant and in many other settings.

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Routing an incoming call away from a mobile telephone may also be advantageous health-wise in decreasing the physical proximity of electromagnetic radiation (emitted by mobile devices) to the user.

It is pointed out that communication-enabled devices can receive an incoming communication for rerouting. However as long as rerouting is direct from device to device, the device to which the rerouting is made need not be generally enabled for external communication as typically managed by a service provider be it phone, cellular, internet and the like. Furthermore, routing is not limited to rerouting of incoming communications but also applies to routing of data from any kind of data source to any kind of data player. Data may arrive from external sources via communication or generated by, or at, a device. Data may be a package or a stream. Such a stream may be unidirectional, bi-directional or multidirectional. Thus video data being captured at a video camera may be directed using embodiments of the present invention to a convenient nearby video player or multimedia enabled PC. Thus, a generally non-communication enabled device will be unable to receive initial communications but can route data to other devices and can receive data as a rerouting target.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is applicable to other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

Reference is now made to Fig. 1, which is a simplified schematic diagram showing a cellular telephone 10 in proximity to a fixed telephone 12 and a computer monitor 14. The three electronic devices need have no relationship to each other except that of proximity. An incoming call is received at cellular telephone 10. As will be explained below, the cellular telephone 10 detects the presence of the other devices 12 and 14 and allows the user to retain the call at the cellular telephone 10 or alternatively to transfer it to either of the other devices 12 and 14. If the user chooses the fixed telephone 12 then the call is rerouted in one of a number of ways explained below to the fixed telephone 12 where the call may be taken in the usual way. If the user chooses the computer monitor 14 then assuming the presence of speakers and a

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microphone the call may be taken again in the normal way. In addition, software may be provided, either at the cellular telephone 10 or at the computer 14 to convert the voice signal into text.

It is noted that in the case of a cellular telephone, the telephone communication is a bi-directional type of communication, and any rerouting should preferably support a return path for the communication.

In addition, using the above rerouting, a call can be set up to support a game session. The call can be set up using a cellular telephone, and then one or both users reroutes the call to a game console.

The above may be achieved by sending rerouting control data along with the rerouted communication, which control data includes a return address. The return address may be a final return address for single stage rerouting, or may be an intermediated return address in the case of multi-stage rerouting. In the latter case, the intermediate return address can be used in an intermediate rerouting device to find a further rerouting address.

Reference is now made to Fig. 2, which is a simplified block diagram showing in schematic form the elements of a modification to be applied to a communication device for use in call rerouting of the kind described in Fig. 1. It will be appreciated that the elements are not restricted to a cellular telephone but may be applicable to any electronic device and more particularly but not exclusively to communication-enabled devices. Depending on the device type, some functionality may be disabled. For example, a land/fixed line phone might not need an outgoing multi-channel multi-media transmitter component. A device not enabled for external communication may not be able to receive originating communications from an external communication network but may be able to route data to other devices and be the target for data and communication rerouting.

The device comprises an incoming multi-media receiver 20 which is responsible for capturing media content and passing it to one of the other components in the device, depending on the circumstances, as will be explained below. One of these other components is outgoing multi-channel multi-media transmitter 22. Transmitter 22 is responsible for transmitting (directly) media streams to external devices which are specified to it. Transmitter 22 comprises a multi-channel port which is able to transmit several media types to several devices at the same time.

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A media transformer 24 is responsible for transforming its input (incoming media) into a required media type, or types, and outputting the resulting media stream(s), or file(s). It too preferably has a multi-channel Output. The media types required as output are preferably specified externally. A preferred embodiment of a media transformer includes a voice to text transformer as discussed above. The voice to text transformer may be augmented by a text to fax transformer. Further transformations include image transformations such as color to black and white, resolution reductions, and image format transformations. Similar transformations may be provided for video, and to the extent applicable for sound formats.

Media cloner 26 is responsible for duplication of its input channel content, preferably received from the incoming multi-media receiver 20 (input media) into as many output channels as indicated to it externally. Each output stream, or file, is routed, as indicated to it externally, to either the media transformer 24 or the outgoing multi-media transmitter 26.

Controller 28 is responsible for managing all the other components and monitoring their activities. In particular, any media (packaged or streamed) transfer between components, input and output, is performed under the controller's supervision.

In operation, content is received at incoming multimedia receiver 20. As will be explained in detail below, one or more destinations for the data as well as media type transformations are selected. In the case of straightforward rerouting of the media to another device, the content is sent directly to outgoing multi-media transmitter 22 for simple media routing to a similar content type device. In other circumstances, transforming from one media to another may be required prior to rerouting. In such a case, content is directed to media transformer 24 prior to rerouting, where transforming is carried out. The transformed content is then directed to the outgoing multi-media transmitter 22 as before. Content is directed to media cloner 26 in cases where it is intended to route the content to more than one device, or if for any reason it is intended to send multiple copies to the same device. From the media cloner the content may then be sent directly to the outgoing multi-media transmitter 22 for direct output, or one or more of the copies may be sent to the media transformer for transformation prior to output. Routing of the content and operation of the above-mentioned components is preferably controlled by controller 28.

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In order to make decisions about selecting destinations and media types and in order to allow other devices to receive availability information, three more components are preferably provided, an announcer device 30, a scout device 32 and a device library 34.

The announcer device 30 is responsible for announcing to the environment the availability of a current device for accepting routed media. It may also indicate device type and use conditions, preferably including any usage charges, thus enabling surrounding devices to avoid say sending video data to a fax machine, or enabling security conscious users to avoid receiving non-trusted data at their device. When the device becomes busy (for example, a phone that is handling a call), it announces this to the environment, typically via transmissions. Similarly, it announces its becoming available. Announcements may be periodically repeated. As an alternative the announcer device 30 may signal only when available or only when unavailable. Another (optional) function of the announcer 30 is that of informing the environment, typically a user, that media content has been routed to it and is now usable (for example, to announce that a rerouted call is now available on this telephone). The latter kind of announcement, that is to say to persons rather than to electronic equipment, may typically comprise light flashes, rings, a loudspeaker sound or even a smell.

Typically, the announcer device 30 may be active (transmitting) or passive (reacting, or reflecting). A simple example of a passive announcer device is a sticker attached to a phone and supplying say device type and conditions of use information using a barcode. The sticker may be scanned and comprehended by the scout devices 32. In addition to a sticker, a passive announcer may be provided using an LCD screen displaying a barcode. The LCD or like screen is advantageous in that, since its display can change, the barcode can indicate current status information. An alternative way of providing status information along with a barcode is by providing a color display alongside the barcode. The color display may be changed electronically or mechanically by the device to indicate different states, and can be read optically along with the barcode.

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The scout device 32 is responsible for scanning the environment to find other devices therein and to determine their status, typically free or busy. The scout is also responsible for obtaining any specific use conditions from announcers 30 of the devices being detected. The scout may be activated periodically and/or upon demand.

Device library 34 contains information needed for communicating with various devices. Such information may typically include usage related information as well as technical information regarding expected media formats and transmission technology specifications, including protocols, used by the device type. It may also contains pre-defined user preferences if defined, including default user preferences.

The controller 28 is responsible for integrating knowledge accumulated by the scout, and for directing operation of the announcer 30. The controller uses either pre-defined user preferences from the device library 34 or it may obtain preferences over a network, or it may simply capture user preferences using menus or like user interaction. The controller preferably follows the appropriate receiving/transmitting protocol including hand shake, identification, authentication, encryption procedures and the like.

The apparatus described in respect of Fig. 2 may be physically packaged, for example as a card, a chip or an attached stand-alone unit. The apparatus may also be realized as software within another apparatus, host device - for example, on a personal computer (PC), cell phone, a personal digital assistant (PDA) or other standard electronic devices. In any case, the host apparatus preferably possesses its own transmission and receiving capabilities, or is connected, perhaps via a network, to another device that does have such capabilities.

For example, a host cellular telephone may use already installed IR for scouting and announcing or any of the previously described technologies. A PC may use an existing peripheral digital camera for scouting and local network devices for transmission.

In many situations, as briefly described in previous examples, certain apparatus activities may be initiated via user interaction, and preferred ways of enabling user interaction comprise displaying menus, or using voice menus, or conceivably even using feel or smell menus. Certain actions are preferably taken automatically, that is to say without user interaction. Such automation may be based on profiles, terms, and conditions. Conditions may for example be associated with the device that performs the routing, as well as with a device to which media is routed.

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Profiles may be stored with the modification apparatus of Fig. 2 or obtained from remote sources.

Menus may be activated in the following modes:

a) Automatic pop-up menu upon event (incoming call, message etc.)

b) Manual (menu) activation ("always on".)

To protect against hostile or non-trusted parties, the modification preferably provides some level of firewall protection for both receiving and transmitting components. Such protection may comprise identification and/or authentication, and may comprise restrictions on routing or receiving information to devices whose owners are not trusted. In addition, to protect privacy, transmitted information may be encrypted.

Considering the outgoing multi-media transmitter 22 in greater detail, the transmitter may incorporate one or more of the following transmission technologies for transmitting media to a nearby device:

- Infra-red (IR)
- Microwave
- Radio (any suitable frequency)
- Sound waves
- Ultrasound
- Wire (and cable) transmission technologies
- Light (visible)
- Laser
- Chemical (mainly smell)
- Quantum techniques

and other technologies that will occur to the skilled person. The choice of technology may depend on general and specific circumstances, such as the type of data to be transmitted, the environment of the transmission, safety and like considerations, and compatibility with as many as possible other devices.

As described above, rerouting may be direct, that is device to device. Direct (local) routing between devices uses one or more of the technologies specified above but does not usually use any external service provider services, network, or infrastructure. Such routing may however use a local computer network, for example

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cable or radio-based, or simple end-to-end communication (for example, IR communication between two or more devices).

In addition, rerouting may be indirect. Indirect non-local routing relies on external service provider services, network and infrastructure. Indirect routing still requires the device initially receiving the communication to detect available receiving devices and determine their capability and availability and also requires potential rerouting recipients to announce their capabilities to the environment. The device initially receiving the communication then makes a decision, typically with the help of user interaction, to determine whether to reroute the message and if so to what device, just as before. However the rerouting information is then sent to the external provider who carries out the rerouting of the communication by switching at the exchange. Such a switching method can take advantage of higher data rates over land lines as opposed to wireless connections.

A third rerouting mode uses local network infrastructure to carry out the rerouting. The communication is routed through a local area network (LAN), or a wide area network (WAN) infrastructure with information to indicate to the network which device has been selected for rerouting. However the network has to interpret the information to decide how to route the information. Either kind of rerouting through the available network infrastructure may be useful, for example for rerouting of an incoming phone call from a cellular telephone to a colleague in another room within the same organization.

There are many ways to exploit the capability to route different content (media) types between different devices. Using only rerouting, one may route one form of content (for example audio) only to devices that handle audio (for example, routing an audio stream to nearby speakers). Using rerouting combined with a media type transformation capability, one may route content transformed specifically for a receiving device. Thus for example voice may be transformed into text and then routed to a fax machine. It may also be possible to transform color images to smell and reroute them to a device able to output smell. Finally, cloning allows the same content to be sent to several devices, and combinations of different transformations for different devices may allow additional dimensions to incoming multi-media. Thus, for example an incoming signal comprising music and voice could be cloned. One of the clones could be transformed into text and transmitted to a monitor able to display text. The other clone could be transmitted to speakers to give high quality

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reproduction of the music. As a further variation, if the incoming music signal is initially directed at a mobile device, it could first of all be rerouted at the service provider level to a land device so as to support a better data rate and then cloned and redirected for text output as described above. Thus high quality audio play of the music can be combined with a display of the words of the song.

The list below describes typical device/media type combinations for rerouting capability. It is noted that not all the devices are typical external-communication-enabled devices. As mentioned above, non-external-communication enabled devices may not receive original incoming communications but they can route data to other devices and receive data as rerouting targets.

1. Audio and Voice

Audio, and voice type media may be routed from devices including cellular telephones and other cellular or mobile devices including voice enabled PDA's, two-way radios etc., land or fixed line telephones, voice mail boxes (voice messages), Hi-Fi sets, both mobile and non-mobile including radio receivers, MP3 players, Cassette, CD, DVD and VCR players, and the like, and TV sets.

Audio and voice-type media may typically be routed to land or fixed line telephones, cellular telephones and like cellular mobile devices, Hi-Fi sets (mobile and non mobile), car audio systems, TV sets, speakers, and LAN/WAN servers and like infrastructure.

2. Video

Video media may be routed from cellular telephones, especially 2.5G and 3G devices, and other similar hand held devices, DVD and VCR players – both mobile and non-mobile, video cameras and recorders, monitors (screens) including those of TV sets, computer monitors, etc. mobile game devices (for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure.

Video media may typically be routed to cellular telephones and especially 2.5G and 3G devices, other cellular hand held devices, monitors (screens) including those of TV sets, computer monitors, etc. DVD and VCR players – including both mobile and non-mobile devices, video cameras and recorders, mobile game devices

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(for example: Game boy), unified messaging mail boxes, road signs and digital advertisement boards, and LAN/WAN servers and like infrastructure etc.

3. Text

Text type data may be routed from cellular telephones where they may be in the form of SMS, email messages and the like, other hand-held devices, unified messaging mail boxes, electronic books, standard computers, and the like.

Such text type data may be routed to monitors (screens) – including TV sets, computer screens, etc. printers, facsimile machines, cellular telephones and other hand held devices, unified messaging mail boxes and LAN/WAN servers and like infrastructure, etc.

4. Images

Image data may typically be routed from digital cameras, facsimile machines, monitors (screens) including TV sets, computer screens, etc., digital vision-oriented equipment such as microscopes, telescopes, binoculars, etc.

Such image data may be routed to cellular telephones, especially 2.5G and 3G devices, other hand held devices, monitors (screens) - including TV sets, computer screens, etc. digital cameras, facsimile machines, printers, unified messaging mail boxes, and LAN/WAN servers and like infrastructure.

As stated earlier, combining the routing capability with the media transformation capability in principle enables routing of any media between any pair of devices appearing in the lists above. Furthermore, combined with cloning, media may be used in different ways at different devices. Such different ways may even be carried out concurrently, thus enabling the simultaneous routing of any media type to any number of devices.

The following is a series of procedure flows for different scenarios.

In the scenarios, appropriate combinations of Routing, Transforming and Cloning an incoming communication are selected to fit the circumstances.

Scenario 1

1. A person carrying a mobile phone enters his colleague's office

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2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the person's cell phone

4. The cell phone detects the said land/fixed line phone and monitor

5. A pop up menu appears on the cell phone display and after the person acknowledges, the phone call is routed to the land/fixed line phone

6. The land/fixed line phone flashes to indicate an incoming call

7. The person receives the call on the land/fixed line phone

8. The person wishes his colleague to be aware of what's being said on the other side of the line

9. He activates a menu on the cell phone display and chooses the "Clone to Monitor" option

10. The monitor shows the conversation text as it is carried out, enabling the colleague to monitor the conversation's content in text form

Scenario 2

This scenario is similar to scenario A. The difference is:

5. The phone call is automatically routed to the land/fixed line phone (based on the person's preferences and environment scanning and detection)

Scenario 3

1. A person, say Smith, carrying a cell phone is sitting in a hotel lobby

2. In the lobby there are four land/fixed line phones

3. A phone call arrives at the person's cell phone

4. Option A:

a. The person points his phone at one of the land/fixed line phones

b. The cell phone detects the said phone as busy

c. The person points his phone at another land/fixed line phones

d. The phone call is routed to that, available, land/fixed phone

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e. The chosen land/fixed phone rings, or flashes to indicate the rerouted call

5. Option B:

a. While ringing, the cell phone indicates on its display that a nearby phone is available

b. The person approves the routing of the call to that nearby phone

c. The nearby phone rings, or flashes to indicate the rerouted call

6. Option C:

a. The call is automatically routed to an available nearby phone

b. The person is notified of the routing on the cell phone display

c. In parallel, the nearby phone uses a loudspeaker to announce the call by calling out Smith's name

d. The nearby phone rings, or flashes to indicate the rerouted call

7. The person receives the call on the available/chosen land/fixed line phone

Scenario 4

1. A hearing impaired person carrying a cell phone enters his colleague's office

2. In the office there are a land/fixed line phone and a computer screen (monitor)

3. An incoming phone call arrives at the colleague's land (fixed) line phone

4. The colleague receives the call and at some point wishes his friend (the hearing impaired person) to participate in the conversation

5. The colleague then clones the voice conversation to both:

i) His monitor (the voice is then transformed to text and appears, as it is spoken, on the monitor)

ii) The hearing impaired person's cell phone

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6. The hearing impaired person "hears" the conversation by reading the text appearing on the monitor

7. The hearing impaired person speaks to his cell phone microphone and can thereby participate in the conversation

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Unless otherwise defined, all technical and scientific terms used herein have the same meanings as are commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods are described herein.

All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the patent specification, including definitions, will prevail. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

It will be appreciated by persons skilled in the art that the present invention is not limited to what has been particularly shown and described hereinabove. Rather the scope of the present invention is defined by the appended claims and includes both combinations and subcombinations of the various features described hereinabove as well as variations and modifications thereof which would occur to persons skilled in the art upon reading the foregoing description.

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Claims

1. Data rerouting apparatus for association with electronic equipment for rerouting data, comprising:

an announcer device for indicating to surrounding equipment that said associated equipment is available for rerouting, thereby to enable receipt of rerouted data therefrom, and

a scout device for scanning surroundings of said associated equipment to find out about compatible equipment in the vicinity, thereby to reroute data thereto.

2. Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. Apparatus according to claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

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7. Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.
Apparatus according to claim 1, wherein said data originates at the device embedding the apparatus.

16. Apparatus according to claim 1, wherein said data is unidirectional.

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17. Apparatus according to claim 1, wherein said data is multidirectional.

18. Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. Data rerouting apparatus for association with electronic equipment for rerouting data to at least one selected target device, comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. A method of rerouting data comprising:

receiving said data at a first device,

determining availability of other devices in the vicinity of said first device, and

rerouting said data to at least one target device selected from devices found to be available.

21. The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

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25. The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

IPR2024-01050
Apple EX1002 Page 211

1/1

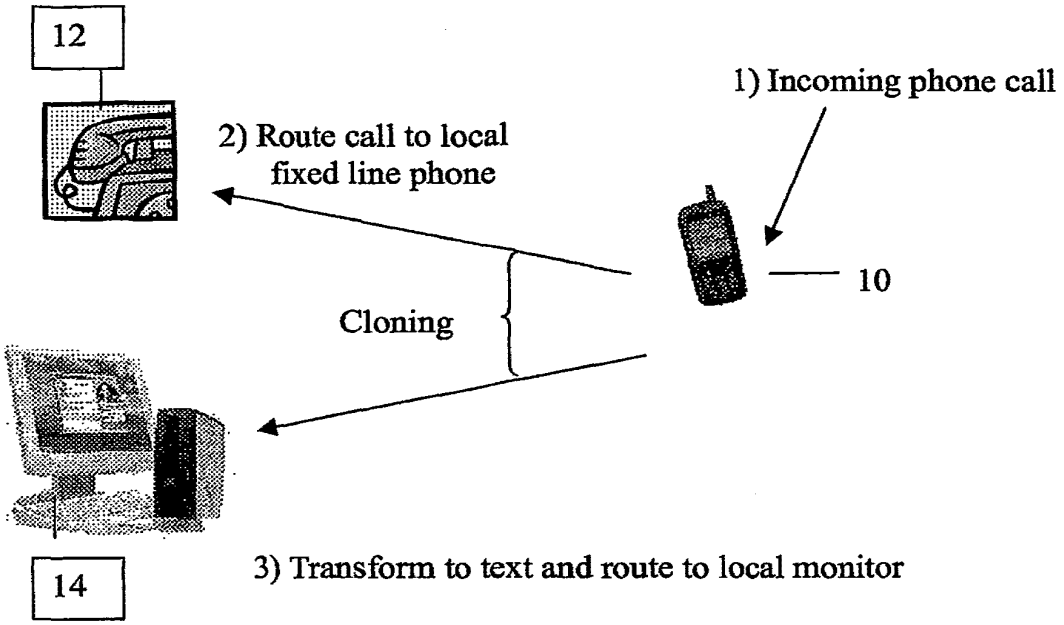

12
1) Incoming phone call
2) Route call to local fixed line phone
10
Cloning
14
3) Transform to text and route to local monitor

Fig. 1

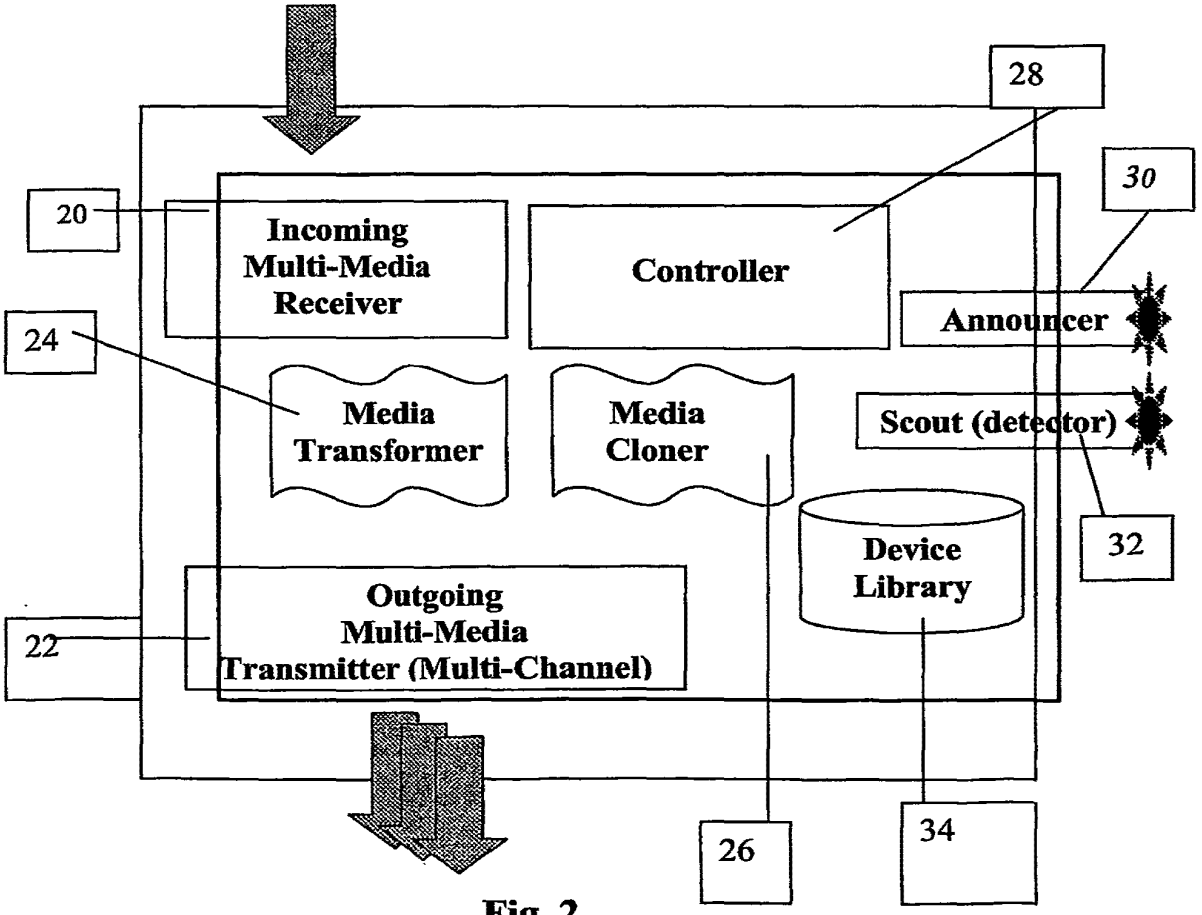

28
30
20
Incoming Multi-Media Receiver
Controller
Announcer
24
Media Transformer
Media Cloner
Scout (detector)
Device Library
32
22
Outgoing Multi-Media Transmitter (Multi-Channel)
26
34

Fig. 2

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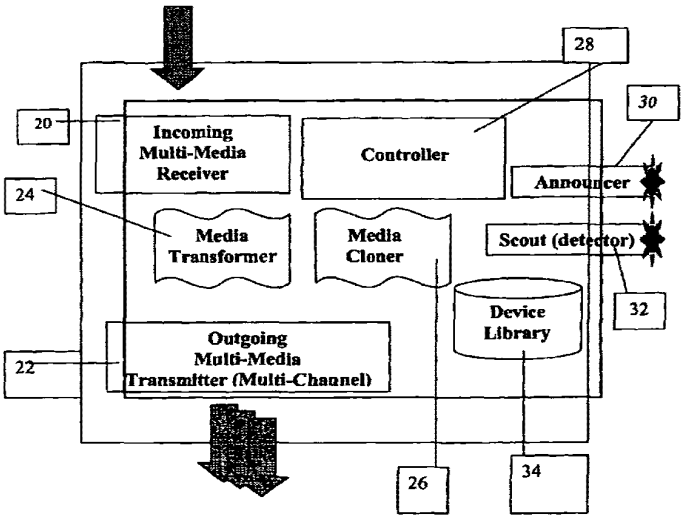
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Published:
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18 March 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES



(57) Abstract: Rerouting apparatus (Fig.2) for rerouting data including multimedia data. The apparatus is for association with electronic equipment and allows for routing the data to a device regarded as the most convenient for playing the media. The apparatus comprises an announcer device (30) for indicating to surrounding equipment that associated equipment is available for rerouting, thereby to enable receipt of rerouted communications therefrom, and a scout device (32) for scanning surroundings of the associated equipment to find out about compatible equipment in the vicinity, thereby to reroute communications thereto. The apparatus may be attached to any device having data processing capability, to enable rerouting of data and communications therebetween.

WO 2004/012026 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL03/00595

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04M 3/42
US CL : 370/312, 432; 379/211.02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 370/312, 313, 328, 432, 466; 379/142.07, 142.14, 211.02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	GB 2,370,451 A (SYDANMAA, et al) 26 June 2002 (26.06.2002), see entire document.	1-27
Y	WO 0141317 (USHER MARTIN PHILIP) 07 June 2001 (07.06.2001), see entire document.	1-27
Y	US 6,134,433 A (JOONG et al) 17 October 2000 (17.10.2000), see entire document.	1-27
Y	US 6,144,671 A (PERINPANATHAN et al) 07 November 2000 (07.11.2000), see entire document.	1-27
Y	US 6,333,919 B2 (GAFFNEY) 25 December 2001 (25.12.2001), see entire document.	1-27

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 December 2003 (12.12.2003)	29 DEC 2003
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Chi Pham Telephone No. 703-305-4[illegible]

Form PCT/ISA/210 (second sheet) (July 1998)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Applicant:	SHMUELI Oded et al	§	
Serial No.:	10/347,388	§	
Filed:	January 21, 2003	§	Group Art Unit: 2616
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	Attorney Docket: 25068
Examiner:	KAO, JUTAI	§	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56. The Examiner is requested to make these citations of official record in this application.

This Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any or more of these citations constitutes prior art.

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Dated: July 15, 2008

UNITED STATES PATENT AND TRADEMARK OFFICE

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67801 7590 10/27/2008

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EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
10/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/17/2008 has been entered.

Response to Amendment

Amendments filed on 07/17/2008 removes the problems addressed in the objection to the specification raised in the previous action. Corresponding objection has been withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1-2, 7-11, 12-16, 18, 20, 23-25 and 28-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (US 2002/0058499) and Mousseau (US 2008/0043693).

Fano discloses a Mobile Valet system including the following features.

Regarding claim 1, Apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: mobile electronic equipment (see mobile valet device 20 shown in Fig. 1) comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see "a local server 80, whereupon

the server sends back an information signal 94, which is then received by the communication device" recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see "the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…" recited in paragraph [0040]), and said rerouting comprises setting up a bidirectional (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Regarding claim 7, wherein said announcer is an active device, operable to transmit at least status information to respective surrounding (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082], that is, a status of waiting for requested information).

Regarding claim 8, wherein said announcer comprises a passive device, carrying at least device identification information (barcode 84 in Fig. 1) for reading by an active scout device (see sensing device 82 in Fig. 1).

Regarding claim 9, wherein said passive device further carries status information of said device (see “bar code tag…used to request...product reviews..." recited in paragraph [0039], wherein product review is considered a status of the product).

Regarding claim 10, wherein said announcer comprises a barcode (see barcode 84 in Fig. 1) and wherein said scout is a barcode reader (sensing capabilities, including...barcodes" recited in paragraph [0030]).

Regarding claim 12, the apparatus further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data (see “The user continues using his mobile device as an input device to provide input to the remote service provider…The local service provider transmits instructions to another mobile device carried by a staff member of the local service provider…” recited in paragraph [0061], that is the server being the communication service provider which performs the rerouting of data to the mobile device of the staff member).

Regarding claim 20, a method of rerouting communication data (see “redirect the information to a more suitable service channel or display” recited in paragraph [0040]) comprising: receiving said data at a first device (see “sends back information signal 94, which is then received by the communications device 74…” recited in paragraph [0082]), scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the

ability to sense and interact with the objects around them" recited in paragraph [0035]), and rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available (see “selects the printers to be compared” recited in paragraph [0060], and see “One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services” recited in paragraph [0030]), said rerouting comprising setting up a bidirectional data link between said first device and said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Regarding claim 28, a cellular telephone comprises the apparatus of claim 1 (see “cellular phones” recited in paragraph [0076]).

Regarding claim 30, wherein said data comprises video media (see “Instead of reviewing the personalized information only through the "mobile service channel," i.e., tiny device screen, the user uses the Mobile Valet to redirect the information to...a nearby video kiosk..." recited in paragraph [0040]).

Regarding claim 35, a method for routing communication data (see “redirect the information to a more suitable service channel or display” recited in paragraph [0040]) comprising: scouting a vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]) of a first mobile device (see mobile valet device 20 shown in Fig. 1), said scanning device being

associated with said first mobile device (see sensing device 82 in Fig. 1 being part of the mobile valet device 20).

Regarding claim 36, routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]), said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Fano does not disclose the following features, regarding claim 1, scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; regarding claim 2, a user interface associated with said device for allowing a user to select between available compatible equipment to reroute data thereto; regarding claim 11, an outgoing multimedia transmitter for locally directing rerouted media to a selected device; regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure; regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network; regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network; regarding claim 16, wherein said data is unidirectional; regarding claim 18, a device database for storing

compatibility data of different equipment type; regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device; wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment; regarding claim 23, carrying out selection between devices found to be available, via a user interface; regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile; regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings; regarding claim 29, wherein said data comprises a cellular telephone call; Regarding claim 31, a distributed system comprising more than one apparatus according to claim 1, in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus; and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity; regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device; regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses; regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data; regarding claim 35, through said scanning device determining availability of other

devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claim 1, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 2, a user interface (see “user interface” recited in paragraph [0048]) associated with said device for allowing a user to select between available compatible equipment to reroute data thereto (see “The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user” recited in paragraph [0049]).

Regarding claim 11, the apparatus further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device (see “the WD providing data directly to a DRD via IR or RF communication” recited in paragraph [0056], wherein the data refers to "multimedia data" as shown in paragraph [0004]).

Regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure (see “DRDs

can receive data directly from WDS and/or through networks (e.g., wireless, Internet, intranet, etc." recited in paragraph [0046]).

Regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 16, wherein said data is unidirectional (see “a WD is providing data directly to a DRD” recited in paragraph [0059]).

Regarding claim 18, the apparatus further comprising a device database for storing compatibility data of different equipment type (see “The WD can be programmed/provided with unique control functions and/or signals applicable to a particular DRD” recited in paragraph [0050]).

Regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 23, carrying out selection between devices found to be available, via a user interface (see “The user can choose to render data at the DRD 7

suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile (see "DRD 7 selection can be based on WD 6 location and/or user profile information" recited in the abstract).

Regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings (see Fig. 3 memory 36, which includes the user profile).

Regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 20, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment (see "The attachment

displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 29, wherein said data comprises a cellular telephone call (see "voice attachments" that could be redirected to a "telephone" recited in paragraph [0016], via a mobile device such as "cellular telephones" as recited in paragraph [0004]).

Regarding claim 31, a distributed system (see Fig. 6) comprising more than one apparatus according to claim 1 (see claim 1 rejection), in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus (see "The redirector component 202B of the host system 202B also sends the datagram 200A…to the mobile device 214B); and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]).

Regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]; that is, the mobile device allows the forwarding of the attachment data to the attachment displayer).

Regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses (see Fig. 6, wherein the redirecting involves the Internet 208 and the relay system 210, which includes multiple intermediate apparatuses).

Regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data (see "…electronic address…The mobile device then processes this information regarding the attachment displayers 216, and sends the host system 202 an attachment displayer choice to use with the attachment 200B. The attachment component 202C of the host system receives the attachment displayer choice from the mobile device 214B, and will then send the attachment 200B to the chosen attachment displayer either through the wireless network 212, directly through the Internet 208, via a LAN connection, via a telephone or cellular connection, or via any other type of connection as specified by the information provided from the chosen attachment displayer 216" recited in paragraph [0073], that is, the mobile device 214 sends the attachment displayer information back to the host, which includes the electronic address of the attachment displayer).

Regarding claim 35, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano using features, as taught by Ortiz and Mousseau, in order to redirect the data to a more suitable service channel.

6. Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 3, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 3, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type

requirements of said compatible equipment (see Sahai "Media formats supported by the client which can be used for choosing and delivering the correct data format…" recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer (see "Typical delivery properties chosen by the user, through a conventional graphical user interface…can include parameters such as…Media formats preferred to be used…" recited in column 4, line 11-27).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

7. Claim 5, 17 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 and 20 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Ortiz also shows the following feature: regarding claim 27, determining availability of other devices in the vicinity of said target device (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations; regarding claim 17, wherein said data is multidirectional; regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device; regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 17, wherein said data is multidirectional (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46, that is, can reroute the data to more than one target device, or a further target device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz, Mousseau and Sahai disclose the claimed limitations.

Fano, Ortiz, Mousseau and Sahai do not disclose the following features: regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Sahai using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Gottlieb (US 5,854,834) and Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 19, the apparatus further comprising a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single data to a plurality of respective target devices; and a transformer, associated with said cloner, for receiving the at least

one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 19, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 19, a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device (see “the server 10 performs: asset selection and media data adaptation” recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai’s invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb and Sahai, in order to allow data to be rerouted to multiple destination devices.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 20 above, and further in view of Kawamoto (US 2004/0080779).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 21, determining compatibility of said available devices in said vicinity with said data.

Kawamoto discloses a print control method including the following features.

Regarding claim 21, determining compatibility of said available devices in said vicinity with said data (see "determined in step (11) that there is the compatibility" recited in paragraph [0111]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Kawamoto, in order to determine the supported data formats.

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz, Mousseau and Kawamoto disclose the claimed limitations.

Fano, Ortiz, Mousseau do not disclose the following features: regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Kawamoto using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

/Ju-Tai Kao/
Acting Examiner of Art Unit 2416

/Kwang B. Yao/
Supervisory Patent Examiner, Art Unit 2416

Notice of References Cited	Application/Control No. 10/347,388	Applicant(s)/Patent Under Reexamination SHMUELI ET AL.	
	Examiner JUTAI KAO	Art Unit 2416	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2008/0043693	02-2008	MOUSSEAU et al.	370/338
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
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	34	✓								
	35	✓								
	36	✓								

IPR2024-01050
Apple EX1002 Page 240

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search, see attached search history	10/23/2008	JK

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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Apple EX1002 Page 242

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S10	2	(("20020133545") or ("20020058499")).PN.	US-PGPUB; USPAT	OR	OFF	2008/10/15 10:32
S11	12779	(scan$4 or detect$4 or prob $4) near7 (availab$4 or compatible) near3 (device or node or endpoint or terminal or unit)	US-PGPUB; USPAT	OR	ON	2008/10/15 10:55
S12	29	S11 same (media near3 (type or format))	US-PGPUB; USPAT	OR	ON	2008/10/15 10:55
S13	4253443	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2008/10/15 10:56
S14	6	S12 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 10:56
S15	24555	ad adj hoc	US-PGPUB; USPAT	OR	ON	2008/10/15 13:59
S16	7	(detect$4 or discover$4) near7 (compatible or suitable) near6 (media near3 (format or type))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:00
S17	0	S16 and S15	US-PGPUB; USPAT	OR	ON	2008/10/15 14:00
S18	111	(detect$4 or discover$4) same (compatible or suitable) near6 (media near3 (format or type))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:01
S19	0	S15 and S18	US-PGPUB; USPAT	OR	ON	2008/10/15 14:01
S20	35	S18 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:01
S21	528	(scan$4 or detect$4 or determin$4) near8 (compatib $6 or availab$6) near7 (nearby or vincinity or close)	US-PGPUB; USPAT	OR	ON	2008/10/15 14:03
S22	0	S21 same (media near3 (type or format))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:03

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S23	67	S21 and (media near3 (type or format))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:03
S24	42	S23 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:04
S25	528	(detect$4 or discover$4) same (compatib$6 or suitab $6 or availab$6) near6 ((communication or media) near3 (format or type))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:06
S26	0	S15 and S18	US-PGPUB; USPAT	OR	ON	2008/10/15 14:06
S27	15	S15 and S25	US-PGPUB; USPAT	OR	ON	2008/10/15 14:06
S28	6	S27 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:06
S29	315	S15 and (scan$6 same announc$5)	US-PGPUB; USPAT	OR	ON	2008/10/15 14:07
S30	188	S29 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:07
S31	160	S30 and (media near4 (type or format))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:07
S32	111997	(detect$4 or discover$4 or scan$4 or determin$6) same (compatib$6 or suitab$6 or availab$6) near6 (device or user or equipment or MS or station or node)	US-PGPUB; USPAT	OR	ON	2008/10/15 14:11
S33	4574	S32 and S15	US-PGPUB; USPAT	OR	ON	2008/10/15 14:11
S34	696	S32 same (media near4 (type or format))	US-PGPUB; USPAT	OR	ON	2008/10/15 14:14
S35	64	S34 and S15	US-PGPUB; USPAT	OR	ON	2008/10/15 14:14
S36	31	S35 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:14
S37	53	S34 and "370"/$.ccls.	US-PGPUB; USPAT	OR	ON	2008/10/15 14:16

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S38	11	S37 and S13	US-PGPUB; USPAT	OR	ON	2008/10/15 14:16
S39	563	(scan$4 or detect$4 or prob $4 or search$4) near8 (compatib$7 or availab$7) near3 (device or user or client or equipment or node or station or MS) with (nearby or close or surround $4 or vincinity or local$4)	US-PGPUB; USPAT	OR	ON	2008/10/16 09:02
S40	499	(scan$4 or detect$4 or prob $4 or search$4) near8 (compatib$7 or availab$7) near3 (device or user or client or equipment or node or station or MS) with (nearby or close or surround $4 or vincinity or local)	US-PGPUB; USPAT	OR	ON	2008/10/16 09:03
S41	1	S40 same (media near3 (type or format or parameter))	US-PGPUB; USPAT	OR	ON	2008/10/16 09:03
S42	84	S40 and "370"/$.ccls.	US-PGPUB; USPAT	OR	ON	2008/10/16 09:04
S43	4253702	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2008/10/16 09:04
S44	37	S43 and S42	US-PGPUB; USPAT	OR	ON	2008/10/16 09:04
S45	1	("20050226344").PN.	US-PGPUB; USPAT	OR	OFF	2008/10/16 10:20

10/ 24/ 2008 10:06:05 AM
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JUL 17 2008 PATENT & TRADEMARK OFFICE

PTO/SB/08a (08-03)
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	Oded SHMUELI et al
Art Unit	2616
Examiner Name	KAO, JUTAI
Attorney Docket Number	25068

Sheet	1	of	1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/J.K./	1	2002/0161862	31-Oct-2002	Horvitz	
	2	2006/0013254	19-Jan-2006	Shmueli et al.	
	3	5,913,038	15-Jun-1999	Griffiths	
	4	6,134,433	17-Oct-2000	Joong et al.	
	5	6,144,671	07-Nov-2000	Perinpanathan et al.	
	6	6,333,919	25-Dec-2001	Gaffney	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[3]	Foreign Patent Documents Country Code[3]-Number[4]-Kind Code[5] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
/J.K./	7	GB 2370451	26-Jun-2002	Sydanmaa et al.		
	8	WO 01/41317	07-Jun-2001	Allaway et al.		
	9	WO 2004/012026	05-Feb-2004	Shmueli et al.		

Examiner Signature	/Jutai Kao/	Date Considered	10/24/2008

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FEB 26 2009
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded SHMUELI et al.	§		
Serial No.:	10/347,388	§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
For:	Routing Of Data Including Multimedia Between Electronic Devices	§	Attorney Docket:	**25068**
Examiner:	Jutai KAO	§		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT TRANSMITTAL

Sir:

(1) Applicant is a:
_X_ small entity
___ other than small entity

(2) The fee for claims 37 C.F.R. §1.16(b)-(d) has been calculated as shown below:

For	Claims after Amendment	Highest Claims Previously Paid
Total Claims	38	36
Indep. Claims	5	3

Small Entity	
Rate	Fee
2 x $ 26.00	$ 52.00
2 x $110.00	$ 220.00
TOTAL:	$ 272.00

(3) A response to the Office Action dated October 27, 2008 _X_ is filed herewith
____ has been filed

(4) Please charge the additional claim fee and any other amount required to Deposit Account No. **50-1407**.

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: February 26, 2009

FEB 26 2009
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:			
	Oded SHMUELI et al.		
Serial No.:	10/347,388		
Filed:	January 21, 2003	Group Art Unit:	2416
For:	Routing Of Data Including Multimedia Between Electronic Devices	Attorney Docket:	**25068**
Examiner:	Jutai KAO		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Sir:

This is in response to the United States Patent and Trademark Office Action mailed October 27, 2008, which response is being made on or before February 27, 2009, and for which a one month extension of time fee is due and enclosed herewith.

Applicants submit this response for entry into the record, in which:

Amendments to the Claims begin on **page 2**.

Remarks begin on **page 10**.

Please amend the above-identified application as follows:

02/27/2009 JADD01 00000064 501407 10347388

02 FC:2202 52.00 DA
03 FC:2201 220.00 DA

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Office Action Mailing Date: October 27, 2008

Examiner: Jutai KAO
Group Art Unit: 2416
Attorney Docket: 25068

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link capable of carrying streaming data, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Previously Presented) Apparatus according to claim 1, further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17. (Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link capable of carrying a datastream between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Previously Presented) The method of claim 20 wherein said data comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for bidirectional streaming data, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and media type of said communication data.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

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Attorney Docket: 25068

37. (New) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

38. (New) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link capable of carrying a datastream, and

wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

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REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-36 are in this Application. Claims 1-36 have been rejected. Claims 1, 20 and 35 have been amended herewith. New claims 37 and 38 have been added herewith.

The Application now comprises, after amendments, claims 1-38, of which claims 1, 20, 35, 37 and 38 are in independent form.

The Examiner has rejected claims 1-2, 7-11, 12-16, 18, 20 and 23-36 under 35 U.S.C. §103(a), as being unpatentable over Fano (US Patent Application Publication No. 2002/0133545) in view of Ortiz (US Patent Application Publication No. 2002/0058499) and Mousseau (US Patent Application Publication No. 2008/0043693).

Claim 1 was amended in the previous response to further define the apparatus as mobile apparatus, and to include some of the limitation of original claim 3: "wherein said scout device is operable to determine media type requirements of said compatible equipment."

Against this new feature the Examiner has cited Mousseau, so that the claim as a whole is now rejected by a mosaic of three documents.

Applicants now believe that claim 1 is not obvious over the mosaic of Fano, Ortiz, and Mousseau. Applicants believe that there would have been no reason for a person ordinarily skilled in the art to combine Fano with Ortiz and Mousseau.

Fano deals with the problem of a user in a particular location with a mobile device such as a PDA, which has limitations to its display capabilities. His solution is for the mobile device to indicate the location and then the service can be sent via the most appropriate channel to any receiving device at that location.

Fano relies on knowledge of the location and its devices and therefore does not have anything similar to the scout device of the claim – see Fano abstract "the context is determined by ... identifying the location of the mobile device". Specifically, Fano fails to teach:

> "a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine *availability* of compatible equipment in the vicinity, thereby to reroute data to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link *capable of carrying a datastream*, and wherein said scout device is operable to determine media type requirements of said compatible equipment." Emphasis added.

That is to say, although the mobile valet of Fano does have a sensor, the sensor is only able to sense the *presence or absence* of surrounding devices, not their *availability*, contrary to the requirements of the present claim. By "availability" is meant more than their mere presence. The claim requires that the scout device is able to *scan* the room and *list* which devices *are free and available* for taking a signal.

Furthermore the claim as amended requires that a bidirectional link *capable of carrying streaming data* is set up between the mobile device and the available device. In Fano no such bidirectional link is set up since the sensor in Fano merely checks barcodes and the like. No such sensor (defined as a device for receiving data) could ever be part of a two-way data link for streaming data which comprises heavy duty communication.

Concerning the availability point, the Examiner cites Ortez and points to Fig. 12 which contains block 122 "is DRD available". Ortez however is simply sending a handshake signal through a network *to a known device at a known address*. There is no *scanning*, and thus no teaching that a device is able to scan a room and find available devices and unavailable devices.

Applicants cannot accept Examiner's argument that the DRD could be considered as the server or the surrounding equipment in Fano's invention since the DRD would need to be both simultaneously in order to meet the claim, and there is no

teaching of two DRDs. However the point is moot since there is no scanning for different devices in any event, either in Fano or in Ortiz.

The point is further moot since there is no teaching in Ortiz that a bidirectional link is set up between a mobile device that did the scanning and the device that the scanning found.

Thus the combination of Fano and Ortiz fails to teach the scout device as claimed, *both* because there is no scanning for availability and *also* because no bidirectional link is set up between the device doing the scanning and the device found to be available, certainly not a link capable of carrying *streaming data*.

Since the scout device is not taught at all, the addition of Mousseau, which merely adds that devices can be tested for compatibility with attachments, is moot, since there is still *no scanning for availability nor a setup of a bidirectional link between the scanning device and the device that is found.*

Paragraph 73 of Mousseau, by contrast refers to a situation where an attachment has already been received by a mobile device. The mobile device then queries nearby attachment displayers to determine which of them is able to display the attachment. This is contrary to the teaching of the claim which is not concerned with *mere display* of an attachment but rather sets up *a bidirectional link* (e.g., for carrying a conversation or playing a game). The reason that the present invention sets up a bidirectional link is that it is for the purpose of directing a multimedia stream such as a video conference call.

No such thing is taught in Fano, Ortez or Mousseau, and therefore none of them have any motivation to set up a bidirectional link capable of carrying streaming data between the mobile device and the device that is identified as available.

The same amendments have been made to claims 20 and 35.

New claim 37 includes all the features of claim 1 as amended including the media transformer. The Examiner cites Sahai against this feature but in Sahai it is a server that carries out this function. It is not obvious that a handheld mobile device could gather the information necessary and also perform this function. Even if this

argument is rejected the claim still stands since Fano, Ortiz and Mousseau taken in combination fail to teach the scout device for the reasons outlined above.

New claim 38 adds the cloning device. The claim includes all of the features in claim 1 and claim 37 and in addition the media cloner. The Examiner cites Gottlieb against the media cloner but Gottlieb first of all works on the assumption of a fixed network with fixed addresses and known devices. Secondly Gottlieb is merely interested in disseminating information on a network to different users. He would never be combined with any of the other teachings since he is not concerned with making information available in the best way to a given user with a limited device but rather is interested in disseminating information as widely as possible. Neither is Gottlieb interested in cloning streaming data as in multi-party conversations or game playing.

In view of the above amendments and remarks it is respectfully submitted that claims 1-38 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



Martin D. Moynihan
Registration No. 40,338

Date: February 26, 2009

Enclosures:

- Petition for Extension of Time (One Month); and
- Additional Claims Fee Transmittal.

FEB 26 2009
PATENT & TRADEMARK OFFICE

2416

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded SHMUELI et al.	§		
Serial No.:	10/347,388	§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
For:	Routing Of Data Including Multimedia Between Electronic Devices	§	Attorney Docket:	**25068**
Examiner:	Jutai KAO	§		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION AND FEE FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Sir:

(1) This is a petition for an extension of time to respond to the Office Action mailed **October 27, 2008**, for a period of **one (1) month.**

(2) Applicant is a:
_X_ small entity ___ verified statement attached
___ verified statement filed

(3)

Extensions (months)	**Fees for small entity**	Fee for other than small entity
☑ **one month**	**$ 65.00**	$ 130.00
☐ two months	$ 245.00	$ 490.00
☐ three months	$ 555.00	$1,110.00
☐ four months	$ 865.00	$1,730.00
☐ five months	$1,175.00	$2,350.00

(4) An amendment _X_ is filed herewith
___ has been filed

(5) Please charge the extension fee and any other amount required to Deposit Account No. **50-1407.**

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

Date: February 26, 2009

02/27/2009 JADDU1 00000064 501407 10347388
01 FC:2251 65.00 DA

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	02/26/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 38	Minus	** 36	= 2	X $26 =	52	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***3	= 2	X $110 =	220	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	272	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/ROZENIA HARMON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 05/12/2009

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ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
05/12/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2416	

All participants (applicant, applicant's representative, PTO personnel):

(1) *JUTAI KAO*.

(2) *Jeff Melnick*.

(3)*Martin Moynihan (Registration #: 40338)*.

(4)_____.

Date of Interview: *07 May 2009*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *1*.

Identification of prior art discussed: *Fano (US 2002/0133545)*.

Agreement with respect to the claims f)☒ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2416

IPR2024-01050
Apple EX1002 Page 264

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

———

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the amended limitation of having a scanner to check availability of surrounding equipment and reroute streaming data. It was agreed that the claim, as it is written currently, does not require the scouting device to perform the rerouting of the streaming data. The attorney agreed to amend the claim such that the rerouting is performed by the scouting device and would thereby overcome the current rejection using Fano. Attorney agrees to wait for the following office action and prepare an amendment according to the result of the Interview and the office action .

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OIPE IAP86
MAY 20 2009
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded SHMUELI et al.	§	Confirmation No.:	5659
Serial No.:	10/347,388	§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
For:	Routing Of Data Including Multimedia Between Electronic Devices	§	Attorney Docket:	**25068**
Examiner:	Jutai KAO	§		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT

Sir:

Further to the Telephone Interview held with the Examiner on May 7, 2009, Applicants submit this Interview Summary for entry into the record, in which:

Amendments to the Claims begin on **page 2**.

Remarks begin on **page 10**.

Please amend the above-identified application as follows:

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Supplemental Amendment

Examiner: Jutai KAO
Group Art Unit: 2416
Attorney Docket: 25068

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to from said mobile equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile equipment, said bidirectional link capable of carrying streaming data, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Previously Presented) Apparatus according to claim 1, further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface

for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17. (Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link with said mobile device, said bidirectional link being capable of carrying a datastream between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Previously Presented) The method of claim 20 wherein said data comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device, wherein the availability is determined based, at least

partly, on media type requirements of said compatible equipment, and media type of said communication data.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

37. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile electronic equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile electronic equipment, said bidirectional link being capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

38. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile electronic equipment, said bidirectional link capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

REMARKS

Claims 1 – 38 are pending.

Claims 1, 20, 35, 37 and 38 are amended herewith.

Summary of Interview

Examiner is thanked for the Interview that was granted on May 7, 2009 regarding the above-identified Application.

In the Interview, the Examiner pointed out that the claims had not been limited to the case where data streaming was via the mobile device.

The Examiner agreed that if the claims were to be so limited then the citation to Fano could be withdrawn.

Amendments to the Claims

Following the Interview, the claims are now limited to the case that redirection is from the mobile device, and allowance without the issuance of a further Office Action is respectfully requested.

In view of the above amendments and remarks it is respectfully submitted that claims 1-38 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



Martin D. Moynihan
Registration No. 40,338

Date: May 18, 2009

PTO/SB/06 (07-06)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	05/20/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 38	Minus	** 38	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/TINA J. BARDEN/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

OIPE IAP38
MAY 26 2009
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PTO/SB/08a (08-03)
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Group Art Unit	2416
Examiner Name	KAO, JUTAI
Attorney Docket Number	25068

Sheet	1	Of	1

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	1	OA of 17 April 2008	

Examiner Signature		Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant: SHMUELI Oded et al §

Serial No.: 10/347,388 §

Filed: January 21, 2003 § Group Art Unit: 2416

For: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES § Attorney Docket: 25068

Examiner: KAO, JUTAI §

OIPE IAP36 MAY 26 2009 PATENT & TRADEMARK OFFICE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited, other than U.S. Patents and U.S. patent applications. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56, 37 CFR 1.97 and 37 CFR 1.98. The Examiner is requested to make these citations of official record in this application.

The undersigned states:

A.: NO CERTICATION OR FEE DUE

☐ This Information disclosure Statement is being filed within three months of filing a national application or entry of a national phase of an international application; or before the mailing date of a first Office action on the merits of the above-identified application. Accordingly, no fee or Certification is believed due. However, if a fee is due, authorization to deduct such fee from the Deposit Account 501407 of the undersigned is hereby provided.

B. CERTIFICATION (if appropriate)

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

C. FEE (if appropriate)

☒ Please charge the fee of $180 set forth in 37 CFR 1.17(p) to Deposit Account 501407.

This Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any one or more of the citations listed constitutes prior art.

05/27/2009 JADD01 00000020 501407 10347388
01 FC:1806 180.00 DA

Dated: May 19, 2009

Respectfully submitted,

Martin D. Moynihan
Registration No. 40,338

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 06/09/2009

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ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
06/09/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

IPR2024-01050
Apple EX1002 Page 281

DETAILED ACTION

Response to Amendment

The current office action addresses the amendments filed on 02/26/2009. The amendments change the scopes of the previous claims. New grounds of rejections are provided using previously cited references and the office action is made FINAL as necessitated by the amendments.

Amendments filed on 05/20/2009 are filed after the statutory six-months period for reply. Thus, the amendments filed on 05/20/2009 are not entered.

Response to Arguments

1. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the argument of the lack of scanning for availability in Fano, it was clearly shown in the previous office action that Fano discloses a “Sensing device…capable of sensing a signal or element in the surrounding” as recited in paragraph [0090] , and the “mobile device gain the ability to sense and interact with the objects around them” recited in paragraph [0035]. The sensing reads on the claimed “scanning” and since the device senses elements in the surrounding and gains the ability to interact, it must be able to detect the availability of the device. In addition, the presence of the device in itself is a measure of availability of the device.

Regarding the argument involving the newly amended feature of the bidirectional link capable of carrying streaming data, Fano does show that its invention is capable to "redirect the information to a more suitable service channel or display, such a s a nearby video kiosk" as recited in paragraph [0040], wherein the redirection of video is considered streaming of data. The link is also bidirectional as shown in Fig. 1 wherein a bi-directional link is shown between the processor 24 to the Remote server 75. That is, the Mobile Valet system of Fano connects the output device 46 with the remote server 76 via the processor 24, storage medium 30 and communication device 75. This link between the Mobile Valet system and the remote server is bidirectional as shown in Fig. 1. The output device 46, which could be internal to the system or external to the system, such as a nearby video kiosk, is capable of carrying video data that is either received from the remote server or stored in the storage medium. Since information displayed may be provided by the remote server (see paragraph [0082]), the portion of the link between the remote server and the communication device may also contain video streams.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 37 recites the limitation "said media transformer" in the final line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 1-2, 7-11, 12-16, 18, 20, 23-25 and 28-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (US 2002/0058499) and Mousseau (US 2008/0043693).

Fano discloses a Mobile Valet system including the following features.

Regarding claim 1, Apparatus for rerouting communication data (see “redirect the information to a more suitable service channel or display” recited in paragraph [0040]), comprising: mobile electronic equipment (see mobile valet device 20 shown in Fig. 1) comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating

to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see “Communication device 74 transmits a request signal 75 for information” recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see “a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device” recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see “the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…” recited in paragraph [0040]), and said rerouting comprises setting up a bidirectional communication link capable of carrying streaming data (see bidirectional links between the device 20 with server 76, and see "redirect the information to a more suitable service channel or display, such a s a nearby video kiosk” as recited in paragraph [0040], wherein the redirection of video is considered streaming of data).

Regarding claim 7, wherein said announcer is an active device, operable to transmit at least status information to respective surrounding (see “Communication

device 74 transmits a request signal 75 for information" recited in paragraph [0082], that is, a status of waiting for requested information).

Regarding claim 8, wherein said announcer comprises a passive device, carrying at least device identification information (barcode 84 in Fig. 1) for reading by an active scout device (see sensing device 82 in Fig. 1).

Regarding claim 9, wherein said passive device further carries status information of said device (see "bar code tag…used to request...product reviews..." recited in paragraph [0039], wherein product review is considered a status of the product).

Regarding claim 10, wherein said announcer comprises a barcode (see barcode 84 in Fig. 1) and wherein said scout is a barcode reader (sensing capabilities, including...barcodes" recited in paragraph [0030]).

Regarding claim 12, the apparatus further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data (see "The user continues using his mobile device as an input device to provide input to the remote service provider…The local service provider transmits instructions to another mobile device carried by a staff member of the local service provider…" recited in paragraph [0061], that is the server being the communication service provider which performs the rerouting of data to the mobile device of the staff member).

Regarding claim 20, a method of rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]) comprising: receiving said data at a first device (see "sends back information signal 94,

which is then received by the communications device 74…" recited in paragraph [0082]), scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), and rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]), said rerouting comprising setting up a bidirectional data link capable of carrying a datastream between said first device and said selected target device (see bidirectional links between the device 20 with server 76, and see "redirect the information to a more suitable service channel or display, such a s a nearby video kiosk" as recited in paragraph [0040], wherein the redirection of video is considered streaming of data).

Regarding claim 28, a cellular telephone comprises the apparatus of claim 1 (see "cellular phones" recited in paragraph [0076]).

Regarding claim 30, wherein said data comprises video media (see "Instead of reviewing the personalized information only through the "mobile service channel," i.e., tiny device screen, the user uses the Mobile Valet to redirect the information to...a nearby video kiosk..." recited in paragraph [0040]).

Regarding claim 35, a method for routing communication data (see “redirect the information to a more suitable service channel or display” recited in paragraph [0040]) comprising: scouting a vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]) of a first mobile device (see mobile valet device 20 shown in Fig. 1) for bidirectional streaming data (see bidirectional links between the device 20 with server 76, and see "redirect the information to a more suitable service channel or display, such a s a nearby video kiosk” as recited in paragraph [0040], wherein the redirection of video is considered streaming of data), said scanning device being associated with said first mobile device (see sensing device 82 in Fig. 1 being part of the mobile valet device 20).

Regarding claim 36, routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available (see “selects the printers to be compared” recited in paragraph [0060], and see “One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services” recited in paragraph [0030]), said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Fano does not disclose the following features, regarding claim 1, scout device also determine the availability of the compatible equipment, and wherein said scout

device is operable to determine media type requirements of said compatible equipment; regarding claim 2, a user interface associated with said device for allowing a user to select between available compatible equipment to reroute data thereto; regarding claim 11, an outgoing multimedia transmitter for locally directing rerouted media to a selected device; regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure; regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network; regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network; regarding claim 16, wherein said data is unidirectional; regarding claim 18, a device database for storing compatibility data of different equipment type; regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device; wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment; regarding claim 23, carrying out selection between devices found to be available, via a user interface; regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile; regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings; regarding claim 29, wherein said data comprises a cellular telephone call; Regarding claim 31, a distributed system comprising more than one apparatus according to claim 1, in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a

second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus; and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity; regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device; regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses; regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data; regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claim 1, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 2, a user interface (see “user interface” recited in paragraph [0048]) associated with said device for allowing a user to select between available

compatible equipment to reroute data thereto (see “The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user” recited in paragraph [0049]).

Regarding claim 11, the apparatus further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device (see “the WD providing data directly to a DRD via IR or RF communication” recited in paragraph [0056], wherein the data refers to "multimedia data" as shown in paragraph [0004]).

Regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure (see “DRDs can receive data directly from WDS and/or through networks (e.g., wireless, Internet, intranet, etc." recited in paragraph [0046]).

Regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 16, wherein said data is unidirectional (see “a WD is providing data directly to a DRD” recited in paragraph [0059]).

Regarding claim 18, the apparatus further comprising a device database for storing compatibility data of different equipment type (see “The WD can be

programmed/provided with unique control functions and/or signals applicable to a particular DRD" recited in paragraph [0050]).

Regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Regarding claim 23, carrying out selection between devices found to be available, via a user interface (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile (see "DRD 7 selection can be based on WD 6 location and/or user profile information" recited in the abstract).

Regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings (see Fig. 3 memory 36, which includes the user profile).

Regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding

equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 20, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 29, wherein said data comprises a cellular telephone call (see "voice attachments" that could be redirected to a "telephone" recited in paragraph [0016], via a mobile device such as "cellular telephones" as recited in paragraph [0004]).

Regarding claim 31, a distributed system (see Fig. 6) comprising more than one apparatus according to claim 1 (see claim 1 rejection), in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus (see "The redirector component 202B of the host system 202B also sends the datagram 200A…to the mobile device

214B); and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]).

Regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]; that is, the mobile device allows the forwarding of the attachment data to the attachment displayer).

Regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses (see Fig. 6, wherein the redirecting involves the Internet 208 and the relay system 210, which includes multiple intermediate apparatuses).

Regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data (see "…electronic address…The mobile device then processes this information regarding the attachment displayers 216, and sends the host system 202 an attachment displayer choice to use with the attachment 200B. The attachment component 202C of the host system receives the attachment displayer choice from the mobile device 214B, and will then send the attachment 200B to the chosen attachment displayer either through the wireless network 212, directly through the Internet 208, via a LAN connection, via a

telephone or cellular connection, or via any other type of connection as specified by the information provided from the chosen attachment displayer 216" recited in paragraph [0073], that is, the mobile device 214 sends the attachment displayer information back to the host, which includes the electronic address of the attachment displayer).

Regarding claim 35, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano using features, as taught by Ortiz and Mousseau, in order to redirect the data to a more suitable service channel.

7. Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 3, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; regarding claim 4, wherein a plurality of

types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 3, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai “Media formats supported by the client which can be used for choosing and delivering the correct data format…” recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see “the server 10 performs: asset selection and media data adaptation” recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai’s invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer (see “Typical delivery properties chosen by the user, through a conventional graphical user

interface…can include parameters such as…Media formats preferred to be used…" recited in column 4, line 11-27).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

8. Claim 5, 17 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 and 20 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Ortiz also shows the following feature: regarding claim 27, determining availability of other devices in the vicinity of said target device (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations; regarding claim 17, wherein said data is multidirectional; regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device; regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Regarding claim 17, wherein said data is multidirectional (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46, that is, can reroute the data to more than one target device, or a further target device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz, Mousseau and Sahai disclose the claimed limitations.

Fano, Ortiz, Mousseau and Sahai do not disclose the following features: regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Sahai using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Gottlieb (US 5,854,834) and Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 19, the apparatus further comprising a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single data to a plurality of respective target devices; and a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 19, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 19, a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device (see “the server 10 performs: asset selection and media data adaptation”

recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb and Sahai, in order to allow data to be rerouted to multiple destination devices.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 20 above, and further in view of Kawamoto (US 2004/0080779).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 21, determining compatibility of said available devices in said vicinity with said data.

Kawamoto discloses a print control method including the following features.

Regarding claim 21, determining compatibility of said available devices in said vicinity with said data (see "determined in step (11) that there is the compatibility" recited in paragraph [0111]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Kawamoto, in order to determine the supported data formats.

12. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz, Mousseau and Kawamoto disclose the claimed limitations.

Fano, Ortiz, Mousseau do not disclose the following features: regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Kawamoto using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

Fano discloses a Mobile Valet system including the following features.

Regarding claims 37 and 38, Apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: mobile electronic equipment (see mobile valet device 20 shown in Fig. 1) comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see "a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device" recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see "the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…" recited in paragraph [0040]), and said rerouting comprises setting

up a bidirectional communication link capable of carrying streaming data (see bidirectional links between the device 20 with server 76, and see "redirect the information to a more suitable service channel or display, such a s a nearby video kiosk" as recited in paragraph [0040], wherein the redirection of video is considered streaming of data).

Fano does not disclose the following features, regarding claim 37, scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer; regarding claim 38, scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer;

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claims 37 and 38, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claims 37 and 38, wherein said scout device is operable to determine media type requirements of said compatible equipment (see “The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claims 37 and 38, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai “Media formats supported by the client which can be used for choosing and delivering the correct data format…” recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see “the server 10 performs:

asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Gottlieb discloses a network information concentrator including the following features.

Regarding claims 37 and 38, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Sahai using features, as taught by Gottlieb, in order to allow rerouted data to be used at the destination device and in order to allow data to be rerouted to multiple destination devices.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

/Ju-Tai Kao/
Acting Examiner of Art Unit 2416

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2416

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
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	29	✓	✓							
	30	✓	✓							
	31	✓	✓							
	32	✓	✓							
	33	✓	✓							
	34	✓	✓							
	35	✓	✓							
	36	✓	✓							

IPR2024-01050
Apple EX1002 Page 309

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
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☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009							
	37		✓							
	38		✓							

OIPE IAP38
MAY 26 2009
PATENT & TRADEMARK OFFICE

PTO/SB/08a (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S.Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Group Art Unit	2416
Examiner Name	KAO, JUTAI
Attorney Docket Number	25068

Sheet	1	Of	1

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/J.K./	1	OA of 17 April 2008	

Examiner Signature	/Jutai Kao/	Date Considered	06/08/2009

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

DO NOT ENTER: /J.K./
06/05/2009

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data to from said mobile equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile equipment, said bidirectional link capable of carrying streaming data, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Previously Presented) Apparatus according to claim 1, further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface

for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17. (Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link with said mobile device, said bidirectional link being capable of carrying a datastream between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Previously Presented) The method of claim 20 wherein said data comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device, wherein the availability is determined based, at least

partly, on media type requirements of said compatible equipment, and media type of said communication data.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

37. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile electronic equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile electronic equipment, said bidirectional link being capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

38. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile equipment to one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link with said mobile electronic equipment, said bidirectional link capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

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AUG 10 2009
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al	§		
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§	Attorney Docket:	**25068**
		§		
Examiner:	Jutai KAO	§		

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed June 9, 2009, which response is being made on or before September 9, 2009, and for which no extension of time fees are due.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on **page 2**.

Remarks begin on **page 10**.

Please amend the above-identified application as follows:

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Office Action Mailing Date: June 9, 2009

Examiner: Jutai KAO
Group Art Unit: 2416
Attorney Docket: 25068

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data ~~to~~ from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile equipment and said selected surrounding equipment, said bidirectional link capable of carrying streaming data, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Previously Presented) Apparatus according to claim 1, further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface

for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Original) Apparatus according to claim 1, wherein said data is unidirectional.

17. (Original) Apparatus according to claim 1, wherein said data is multidirectional.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said target device and said mobile device, said bidirectional link being capable of carrying a datastream between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Previously Presented) The method of claim 20 wherein said data comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device via a bidirectional link set up between said mobile

device and said target device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and media type of said communication data.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

37. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected on of said surrounding equipment and said mobile electronic equipment, said bidirectional link being capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Office Action Mailing Date: June 9, 2009

Examiner: Jutai KAO
Group Art Unit: 2416
Attorney Docket: 25068

38. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of surrouding equipment and said mobile electronic equipment, said bidirectional link capable of carrying a datastream, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

In re Application of: Oded SHMUELI et al
Serial No.: 10/347,388
Filed: January 21, 2003
Office Action Mailing Date: June 9, 2009

Examiner: Jutai KAO
Group Art Unit: 2416
Attorney Docket: 25068

REMARKS

Claims 1 – 38 are pending.

Claims 1, 20, 35, 37 and 38 are amended herewith.

Summary of Interview

Examiner is thanked for the Interview that was granted on May 7, 2009 regarding the above-identified Application.

In the Interview, the Examiner pointed out that the claims had not been limited to the case where data streaming was via the mobile device.

The Examiner agreed at the interview that if the claims were to be so limited then the citation to Fano could be withdrawn.

Amendments to the Claims

Following the Interview, the claims are now limited to the case that redirection is from the mobile device and that the redirection involves setting up a bidirectional link which is between the mobile device and the selected surrounding equipment.

In Fano, a bidirectional link is set up between the mobile valet application and the remote server. However, the link between the mobile device and the selected surrounding equipment is not bidirectional and cannot carry video. In this respect the Examiner cites Fano paragraph 82 to suggest that information from the remote server is displayed on the selected surrounding equipment and that information can include video.

However paragraph 82 of Fano merely teaches that information signal 94 is provided to the mobile device, "whereupon the server sends back an information signal 94 which is then received by the communications device 74 and forwarded to the mobile valet application 28". Note that there is no teaching about content, merely information. The information signal is sent in response to a request.

The construction of the information signal is described on Fano paragraph 83. "Remote server 76 or local server 80 processes the information encoded within

request signal 75 and generates information signal 94." That is to say the information signal 94 is something *generated in response to a request*. This cannot apply to video streaming.

Furthermore the continuation of the paragraph tells us exactly what the information signal provides. "Information signal 94 comprises information that can be used to generate location based menu 120, general service menu and location based services 122." A menu is just a list of text items in a sequence. There is no transmission of video and Fano gives no hint of any transmission of video streaming.

As discussed in paragraph 84 of Fano, the request signal could be generated by a web browser at the mobile device and the web browser receives in response the information signal. However again here the information signal is the same information signal referred to in the preceding paragraph, namely that *generated* in response to the information request. Streaming video is obtained from a storage device not generated. There is no doubt that Fano does not teach a bidirectional video conversation or the playing of a game.

Even if the browser referred to in Fano were to receive streaming video, there is no teaching of the browser passing on the streaming video to the end unit.

In any event there is no teaching in Fano that any content is transferred or rerouted from the mobile device to the selected end unit. All that is transferred is the text needed to supply a menu.

Thus Fano does not teach or suggest:

"thereby to reroute data to from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile equipment and said selected surrounding equipment, said bidirectional link capable of carrying streaming data,"

and allowance without the issuance of a further Office Action is respectfully requested.

In view of the above amendments and remarks it is respectfully submitted that claims 1-38 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

Martin D. Moynihan

Martin D. Moynihan
Registration No. 40,338

Date: August 10, 2009

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 08/10/2009

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 38	Minus	** 38	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DORIS M. KING/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 08/26/2009

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2416	

MAIL DATE	DELIVERY MODE
08/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							
	21	✓	✓							
	22	✓	✓							
	23	✓	✓							
	24	✓	✓							
	25	✓	✓							
	26	✓	✓							
	27	✓	✓							
	28	✓	✓							
	29	✓	✓							
	30	✓	✓							
	31	✓	✓							
	32	✓	✓							
	33	✓	✓							
	34	✓	✓							
	35	✓	✓							
	36	✓	✓							

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Apple EX1002 Page 334

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2416

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009							
	37		✓							
	38		✓							

OIPE TAPS6
AUG 10 2009
PATENT & TRADEMARK OFFICE

DO NOT ENTER: /J.K./
08/25/2009

JFW AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al	§		
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§	Attorney Docket:	**25068**
		§		
Examiner:	Jutai KAO	§		

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO FINAL

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed June 9, 2009, which response is being made on or before September 9, 2009, and for which no extension of time fees are due.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on **page 2.**

Remarks begin on **page 10.**

Please amend the above-identified application as follows:

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/347,388	**Applicant(s)** SHMUELI ET AL.	
	Examiner JUTAI KAO	**Art Unit** 2416	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 August 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-38*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Steven HD Nguyen/
Primary Examiner, Art Unit 2416

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Continuation of 3. NOTE: Amended claims now requires that redirection is involves setting up a bidirectional link "between the mobile device and the selected surrounding equipment"; the amendment overcomes previous rejection, however, further search and consideration is required for the amended portion of the claim.

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Apple EX1002 Page 338

PTO/SB/30 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**10/347,388**
Filing Date	**January 21, 2003**
Examiner Name	**KAO Jutai**
First Named Inventor	**Oded SHMUELI**
Group Art Unit	**2416**
Confirmation No.:	**5659**
Attorney Docket Number	**25068**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA.* See *Changes to Application Examination and Provisional Application Practice*, Final Rule, 65 *Fed. Reg.* 50092 (Aug. 16, 2000); Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**
   - a. ☐ Previously submitted
     - i. ☒ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on **August 10, 2009** (Any unentered amendment(s) referred to above will be entered).
     - ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   - b. ☒ **Enclosed**
     - **i.** ☐ **Amendment/Reply**
     - ii. ☐ Affidavit(s)/Declaration(s)
     - iii. ☐ Information Disclosure Statement (IDS)
     - **iv.** ☒ **Other One (1) Month Extension fee**
     - **v.** ☐ Other
2. **Miscellaneous**
   - a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) **required**)
   - b. ☐ Other _____
3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

☒ **Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27**

For:	*Claims after Amendment*	*Highest Claims Previously Paid*	*SMALL ENTITY* RATE	FEE	OTHER THAN A SMALL ENTITY RATE	FEE
Request for Continued Examination (RCE)			1	$ 405		$
Multiple Dependent Claims			0 x $ 195	$ 0		$
Total Claims*	38	38	0 x $ 26	$ 0		$
Independent Claims*	5	5	0 x $110	$ 0		$
* (If the difference in Column 1 is less than "0", enter "0" in Column 2)			*TOTAL*	$405.	*TOTAL*	$

☒ **The Commissioner is hereby authorized to charge $405.- filing fees to Deposit Account No. 50-1407. In the event additional fees are required, please charge these additional fees to Deposit Account No. 50-1407. In the event of overpayment, please credit Deposit Account No. 50-1407.**

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Jason H. Rosenblum	*Registration No. (Attorney/Agent*	56437
Signature	/Jason H. Rosenblum/	*Date*	**October 6, 2009**

Electronic Patent Application Fee Transmittal

Application Number:	10347388
Filing Date:	21-Jan-2003
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Jason Harris Rosenblum
Attorney Docket Number:	25068

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	65	65

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Apple EX1002 Page 340

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	2801	1	405	405
		Total in USD ($)		**470**

Electronic Acknowledgement Receipt

EFS ID:	6206889
Application Number:	10347388
International Application Number:	
Confirmation Number:	5659
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum
Filer Authorized By:	
Attorney Docket Number:	25068
Receipt Date:	06-OCT-2009
Filing Date:	21-JAN-2003
Time Stamp:	09:30:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$470
RAM confirmation Number	6231
Deposit Account	501407
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		25068_RCE_following_Advisoy_Action_dated_26_Aug_09.pdf	250128 629e05bbcde6274272f929c5652dbd1be99eeaed	yes	2

Multipart Description/PDF files in .zip description

Document Description	Start	End
Extension of Time	1	1
Request for Continued Examination (RCE)	2	2

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	31492 bf4f53df6658a0493d9a10e726a9d73ea54ab057	no	2

Warnings:

Information:

Total Files Size (in bytes):	281620

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§	
		§	
	Oded SHMUELI et al	§	
		§	Confirmation No.: 5659
Serial No.:	10/347,388	§	
		§	
Filed:	January 21, 2003	§	Group Art Unit: 2416
		§	
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	
		§	Attorney
Examiner:	KAO Jutai	§	Docket: **25068**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION AND FEE FOR EXTENSION OF TIME UNDER 37 C.F.R. §1.136(a)

Sir:

(1) This is a petition for an extension of time to respond to the Advisory Action dated August 26, 2009 and to the Final Office Action mailed **June 9, 2009**, for a period of **one (1) month**.

(2) Applicant is a:
__X__ small entity ___ verified statement attached
___ verified statement filed

(3)

Extensions (months)	Fees for small entity	Fee for other than small entity
☑ **one month**	**$ 65.00**	$ 130.00
☐ two months	$ 245.00	$ 490.00
☐ three months	$ 555.00	$1,110.00
☐ four months	$ 865.00	$1,730.00
☐ five months	$1,175.00	$2,350.00

(4) An amendment __X__ is filed herewith
___ has been filed

(5) Please charge the extension fee and any other amount required to Deposit Account No. **50-1407**.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56437
Telephone: 718.246.8482

Date: October 6, 2009

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 10/06/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 38	Minus	** 38	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/JACQULYN L. WILLIAMS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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JFW AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
	Oded SHMUELI et al	§		
Serial No.:	10/347,388	§		
Filed:	January 21, 2003	§	Group Art Unit:	2416
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	Attorney Docket:	**25068**
Examiner:	Jutai KAO	§		

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RESPONSE TO FINAL

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed June 9, 2009, which response is being made on or before September 9, 2009, and for which no extension of time fees are due.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on **page 2.**

Remarks begin on **page 10.**

Please amend the above-identified application as follows:

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 12/23/2009

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ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2473	

MAIL DATE	DELIVERY MODE
12/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/06/2009 has been entered.

Response to Amendment

Amendments filed on 08/10/2009 change the scopes of the previously filed claims. New grounds of rejections are applied to the claims. Amendments filed on 08/10/2009 fail to respond to the 35 USC 112 rejection made to claim 37, the corresponding rejection is maintained in the current office action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claim 1-38, the applicant argues that the primary reference used in the previous rejection (Fano) does not disclose the feature of setting up a bidirectional link between the mobile device and the selected surrounding equipment wherein the bidirectional link is capable of carrying streaming data. Specifically, Fano only discloses such link to be established between a remote

server and the selected surrounding equipment, in which the mobile device only acts as a remote control selecting the data to be sent from the mobile device to the selected surrounding equipment. The examiner agrees that Fano does not explicitly disclose that streaming data is sent directly from the mobile device to the selected surrounding equipment as argued by the applicant. However, the previously cited secondary reference (Ortiz) does disclose such feature. Therefore, new grounds of rejections are made to claims 1-38 relying on Ortiz to read on the feature of rerouting data from the mobile electronic equipment to a selected on of the surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment and said mobile electronic equipment, said bidirectional link being capable of carrying a streaming media data (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]).

Claim Objections

3. Claim 37 is objected to because of the following informalities: typographical error. Line 13 of claim 37 recites “between said selected on of said

surrounding equipment", wherein the underline section should be "one" instead of "on". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 37 recites the limitation "said media transformer" in the final line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 1-2, 7-11, 12-16, 18, 20, 23-25 and 28-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (US 2002/0058499) and Mousseau (US 2008/0043693).

Fano discloses a Mobile Valet system including the following features.

Regarding claim 1, Apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: mobile electronic equipment (see mobile valet device 20 shown in Fig. 1), comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see "a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device" recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..."

recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see “the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…” recited in paragraph [0040]).

Regarding claim 7, wherein said announcer is an active device, operable to transmit at least status information to respective surrounding (see “Communication device 74 transmits a request signal 75 for information” recited in paragraph [0082], that is, a status of waiting for requested information).

Regarding claim 8, wherein said announcer comprises a passive device, carrying at least device identification information (barcode 84 in Fig. 1) for reading by an active scout device (see sensing device 82 in Fig. 1).

Regarding claim 9, wherein said passive device further carries status information of said device (see “bar code tag…used to request...product reviews..." recited in paragraph [0039], wherein product review is considered a status of the product).

Regarding claim 10, wherein said announcer comprises a barcode (see barcode 84 in Fig. 1) and wherein said scout is a barcode reader (sensing capabilities, including...barcodes" recited in paragraph [0030]).

Regarding claim 12, the apparatus further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data (see “The user continues using his mobile device as an input device to provide input

to the remote service provider…The local service provider transmits instructions to another mobile device carried by a staff member of the local service provider…" recited in paragraph [0061], that is the server being the communication service provider which performs the rerouting of data to the mobile device of the staff member).

Regarding claim 20, a method of rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]) comprising: receiving said data at a first device (see "sends back information signal 94, which is then received by the communications device 74…" recited in paragraph [0082]), scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), and rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]).

Regarding claim 28, a cellular telephone comprises the apparatus of claim 1 (see "cellular phones" recited in paragraph [0076]).

Regarding claim 30, wherein said data comprises video media (see "Instead of reviewing the personalized information only through the "mobile service channel," i.e., tiny device screen, the user uses the Mobile Valet to redirect the information to...a nearby video kiosk..." recited in paragraph [0040]).

Regarding claim 35, a method for routing communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]) comprising: scouting a vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]) of a first mobile device (see mobile valet device 20 shown in Fig. 1), said scanning device being associated with said first mobile device (see sensing device 82 in Fig. 1 being part of the mobile valet device 20).

Regarding claim 36, routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]), said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Fano does not disclose the following features, regarding claim 1, scout device also determine the availability of the compatible equipment, wherein said scout device is operable to determine media type requirements of said compatible equipment; and reroute data from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile equipment and said selected surrounding equipment, said bidirectional link capable of carrying streaming data; regarding claim 2, a user interface associated with said device for allowing a user to select between available compatible equipment to reroute data thereto; regarding claim 11, an outgoing multimedia transmitter for locally directing rerouted media to a selected device; regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure; regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network; regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network; regarding claim 16, wherein said data is unidirectional; regarding claim 18, a device database for storing compatibility data of different equipment type; regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device; wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment; rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity, said rerouting comprises setting up a bidirectional data link between said

target device and said mobile device, said bidirectional link being capable of carrying a datastream between said first mobile device and said selected target device; regarding claim 23, carrying out selection between devices found to be available, via a user interface; regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile; regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings; regarding claim 29, wherein said data comprises a cellular telephone call; regarding claim 31, a distributed system comprising more than one apparatus according to claim 1, in which: the scout device on a first apparatus is configured to detect an announcer device on a second apparatus; the first apparatus is configured to forward data to the second apparatus; and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity; regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device; regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses; regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data; regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said

mobile device via a bidirectional link set up between said mobile device and said target device, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claim 1, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device); and reroute data from said mobile equipment to a selected one of said surrounding equipment (see “when a WD is providing data directly to a DRD” recited in paragraph [0059]; and see “Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6” recited in the abstract), wherein said rerouting comprises setting up a bidirectional communication link between said mobile equipment and said selected surrounding equipment, said bidirectional link capable of carrying streaming data (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the

received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]).

Regarding claim 2, a user interface (see “user interface” recited in paragraph [0048]) associated with said device for allowing a user to select between available compatible equipment to reroute data thereto (see “The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user” recited in paragraph [0049]).

Regarding claim 11, the apparatus further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device (see “the WD providing data directly to a DRD via IR or RF communication” recited in paragraph [0056], wherein the data refers to "multimedia data" as shown in paragraph [0004]).

Regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure (see “DRDs can receive data directly from WDS and/or through networks (e.g., wireless, Internet, intranet, etc." recited in paragraph [0046]).

Regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network (see "voice and video services over cellular networks" recited in paragraph [0006]).

Regarding claim 16, wherein said data is unidirectional (see "a WD is providing data directly to a DRD" recited in paragraph [0059]).

Regarding claim 18, the apparatus further comprising a device database for storing compatibility data of different equipment type (see "The WD can be programmed/provided with unique control functions and/or signals applicable to a particular DRD" recited in paragraph [0050]).

Regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device); rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity (see "when a WD is providing data directly to a DRD" recited in paragraph [0059]; and see "Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6" recited in the abstract), said rerouting comprises setting up a bidirectional data link between said target device and said mobile device, said bidirectional link being capable of carrying a datastream between said first mobile device and said selected target

device (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]).

Regarding claim 23, carrying out selection between devices found to be available, via a user interface (see “The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user” recited in paragraph [0049]).

Regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile (see “DRD 7 selection can be based on WD 6 location and/or user profile information” recited in the abstract).

Regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings (see Fig. 3 memory 36, which includes the user profile).

Regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device) for receiving of bidirectional

streaming data directed from said mobile device (see “when a WD is providing data directly to a DRD” recited in paragraph [0059]; and see “Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6” recited in the abstract) via a bidirectional link set up between said mobile device and said target device (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment (see “The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 20, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment (see “The attachment displayer will then send back...to the mobile device...information

pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 29, wherein said data comprises a cellular telephone call (see “voice attachments” that could be redirected to a “telephone” recited in paragraph [0016], via a mobile device such as “cellular telephones” as recited in paragraph [0004]).

Regarding claim 31, a distributed system (see Fig. 6) comprising more than one apparatus according to claim 1 (see claim 1 rejection), in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus (see “The redirector component 202B of the host system 202B also sends the datagram 200A…to the mobile device 214B); and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity (see “mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…” recited in paragraph [0073]).

Regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device (see “mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…” recited in paragraph [0073]; that is, the mobile device allows the forwarding of the attachment data to the attachment displayer).

Regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses (see Fig. 6, wherein the redirecting involves the Internet 208 and the relay system 210, which includes multiple intermediate apparatuses).

Regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data (see "…electronic address…The mobile device then processes this information regarding the attachment displayers 216, and sends the host system 202 an attachment displayer choice to use with the attachment 200B. The attachment component 202C of the host system receives the attachment displayer choice from the mobile device 214B, and will then send the attachment 200B to the chosen attachment displayer either through the wireless network 212, directly through the Internet 208, via a LAN connection, via a telephone or cellular connection, or via any other type of connection as specified by the information provided from the chosen attachment displayer 216" recited in paragraph [0073], that is, the mobile device 214 sends the attachment displayer information back to the host, which includes the electronic address of the attachment displayer).

Regarding claim 35, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano using features, as taught by Ortiz and Mousseau, in order to redirect the data to a more suitable service channel.

9. Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 3, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 3, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment

(see Sahai "Media formats supported by the client which can be used for choosing and delivering the correct data format…" recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer (see "Typical delivery properties chosen by the user, through a conventional graphical user interface…can include parameters such as…Media formats preferred to be used…" recited in column 4, line 11-27).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

10. Claim 5, 17 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 and 20 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Ortiz also shows the following feature: regarding claim 27, determining availability of other devices in the vicinity of said target device (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations; regarding claim 17, wherein said data is multidirectional; regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device; regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 17, wherein said data is multidirectional (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46, that is, can reroute the data to more than one target device, or a further target device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz, Mousseau and Sahai disclose the claimed limitations.

Fano, Ortiz, Mousseau and Sahai do not disclose the following features: regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Sahai using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 1 above, and further in view of Gottlieb (US 5,854,834) and Sahai (US 6,594,699).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 19, the apparatus further comprising a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single data to a plurality of respective target devices; and a transformer, associated with said

cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 19, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 19, a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device (see “the server 10 performs: asset selection and media data adaptation” recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai’s invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Gottlieb and Sahai, in order to allow data to be rerouted to multiple destination devices.

13. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz and Mousseau as applied to claim 20 above, and further in view of Kawamoto (US 2004/0080779).

Fano, Ortiz and Mousseau disclose the claimed limitations.

Fano, Ortiz and Mousseau do not disclose the following features: regarding claim 21, determining compatibility of said available devices in said vicinity with said data.

Kawamoto discloses a print control method including the following features.

Regarding claim 21, determining compatibility of said available devices in said vicinity with said data (see "determined in step (11) that there is the compatibility" recited in paragraph [0111]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz and Mousseau using features, as taught by Kawamoto, in order to determine the supported data formats.

14. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau and Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz, Mousseau and Kawamoto disclose the claimed limitations.

Fano, Ortiz, Mousseau do not disclose the following features: regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Kawamoto using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

15. Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau, Sahai and Gottlieb.

Fano discloses a Mobile Valet system including the following features.

Regarding claims 37 and 38, apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: mobile electronic equipment (see

mobile valet device 20 shown in Fig. 1) comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see “Communication device 74 transmits a request signal 75 for information” recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see “a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device” recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see “the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…” recited in paragraph [0040]).

Fano does not disclose the following features, regarding claim 37, reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment

and said mobile electronic equipment, said bidirectional link being capable of carrying a datastream; scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer; regarding claim 38, scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer;

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claims 37 and 38, scout device (as shown in Fano) reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment and said mobile electronic equipment (see “when a WD is providing data directly

to a DRD" recited in paragraph [0059]; and see "Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6" recited in the abstract), said bidirectional link being capable of carrying a datastream (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]); and also determine the availability of the compatible equipment (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claims 37 and 38, wherein said scout device is operable to determine media type requirements of said compatible equipment (see "The attachment displayer will then send back...to the mobile device...information

pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claims 37 and 38, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai “Media formats supported by the client which can be used for choosing and delivering the correct data format…” recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements (see “the server 10 performs: asset selection and media data adaptation” recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai’s invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Gottlieb discloses a network information concentrator including the following features.

Regarding claims 37 and 38, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

(see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Sahai using features, as taught by Gottlieb, in order to allow rerouted data to be used at the destination device and in order to allow data to be rerouted to multiple destination devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

/Ju-Tai Kao/
Acting Examiner of Art Unit 2473

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009						
	1	✓	✓	✓						
	2	✓	✓	✓						
	3	✓	✓	✓						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	✓	✓						
	8	✓	✓	✓						
	9	✓	✓	✓						
	10	✓	✓	✓						
	11	✓	✓	✓						
	12	✓	✓	✓						
	13	✓	✓	✓						
	14	✓	✓	✓						
	15	✓	✓	✓						
	16	✓	✓	✓						
	17	✓	✓	✓						
	18	✓	✓	✓						
	19	✓	✓	✓						
	20	✓	✓	✓						
	21	✓	✓	✓						
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	24	✓	✓	✓						
	25	✓	✓	✓						
	26	✓	✓	✓						
	27	✓	✓	✓						
	28	✓	✓	✓						
	29	✓	✓	✓						
	30	✓	✓	✓						
	31	✓	✓	✓						
	32	✓	✓	✓						
	33	✓	✓	✓						
	34	✓	✓	✓						
	35	✓	✓	✓						
	36	✓	✓	✓						

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009						
	37		✓	✓						
	38		✓	✓						

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:			
	Oded SHMUELI et al	Confirmation No.:	5659
Serial No.:	10/347,388		
Filed:	January 21, 2003	Group Art Unit:	2416
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	Attorney Docket:	**25068**
Examiner:	Jutai KAO		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Sir:

This is in response to the United States Patent and Trademark Office Action mailed December 23, 2009, which response is being made on or before April 23, 2010, and for which a one-month extension of time fee is due.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on **page 2**.
Remarks begin on **page 10**.

Please amend the above-identified application as follows:

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile ~~electronic equipment~~ communication device comprising:

an announcer device associated with said ~~first~~ mobile ~~electronic equipment~~communication device, and configured for indicating to surrounding equipment that said ~~associated first~~ mobile ~~electronic equipment~~communication device is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said ~~first electronic equipment~~mobile communication device, configured for scanning surroundings of said associated ~~first~~ mobile ~~electronic~~ communication ~~equipment~~ device to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile communication device ~~equipment~~ to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile communication device ~~equipment~~ and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link ~~capable of~~ carrying streaming data over both directions of said first link direction and said second link direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3. (Previously Presented) Apparatus according to claim 1, further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements.

4. (Original) Apparatus according to claim 3, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

5. (Original) Apparatus according to claim 1, further comprising a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations.

6. (Original) Apparatus according to claim 3, further comprising a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Currently Amended) Apparatus according to claim 1, wherein said streaming data in said first link direction is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment ~~unidirectional~~.

17. (Currently Amended) Apparatus according to claim 1, wherein said streaming data is ~~multidirectional~~ directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said target device and said mobile device, said bidirectional data link having a first direction from said mobile device to said target device and a second direction from said target device to said mobile device, said bidirectional link being capable of carrying a multimedia datastream in both of said first direction and said second direction between said first mobile device and said selected target device.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Currently Amended) The method of claim 20 wherein said streaming data sent in both said first direction and said second direction comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device via a bidirectional link set up between said mobile device and said target device, said bidirectional link having a first data streaming direction from said mobile device to said target device and a second data streaming direction from said target device to said mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible

equipment, and media type of said communication data, the method further comprising streaming data in both of said first direction and said second direction.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

37. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected ~~on~~ one of said surrounding equipment and said mobile electronic equipment said bidirectional link having a first data streaming direction from said mobile equipment to said selected one of said surrounding equipment and a second data streaming direction from said selected one of said surrounding equipment to said mobile equipment, ~~,~~ said bidirectional link being capable of carrying a datastream in said first direction and in said second direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media cloner.

38. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of surrouding equipment and said mobile electronic equipment, said bidirectional link having a first data streaming direction from said mobile equipment to said selected one of said surrounding equipment and a second data streaming direction from said selected one of said surrounding equipment to said mobile equipment, said bidirectional link capable of carrying a datastream in said first direction and in said second direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

39. (New) The apparatus of claim 1, wherein said streaming data sent in both said first direction and said second direction comprises video media.

REMARKS

Claims 1 – 38 are pending.

Claims 1, 20, 30, 35, 37 and 38 are amended herewith.

New claim 39 is added.

Amendments to the Claims

Claim Objections

Claim 37 has been amended to remove the informality.

Claim Rejections

Claim 37 has been amended to overcome the rejection under 35 USC 112 and to provide proper antecedent basis for all the features.

The claims were limited in a previous response to the case that redirection is from the mobile device and that the redirection involves setting up a bidirectional link which is between the mobile device and the selected surrounding equipment.

In the present response the claims are limited to define that streaming data is provided in both directions of the bidirectional link.

Ortez indeed shows a bidirectional data link which is capable of carrying a datastream.

However Ortez fails to teach that the bidirectional data link carries out data streaming in both directions of the link. On the contrary, Ortez has data streaming in one direction, with mere control signals and acknowledgements (and no streaming data such as e.g., video) traveling in the other direction.

In Fano, a bidirectional link is set up between the mobile valet application and the remote server. However, the link between the mobile device and the selected surrounding equipment is not bidirectional and cannot carry streaming data such as video.

Mousseau is cited for teaching a system for redirecting message attachments between a host system and a mobile data communications system.

The present system however does not involve a host, but merely a mobile communication system and devices that happen to be around.

The Examiner cites Mousseau against claim 1 because Moussea teaches in paragraph 73 determining media type requirements and the host telling the mobile device what type of attachment the local devices can display.

However, the present claim is not about mere display of attachments. Rather it is about bidirectional streaming of data. Mousseau teaches at most passing of a file attachment which is a single entity of defined size and a one-time data transfer. The present embodiments refer to bidirectional transfer of data of undefined size. Data streaming is an open-ended transfer of data.

Furthermore, Mousseau does not have a scout device, but rather requires all devices to be connected via a network to a host. That is the only way that the host can tell the mobile device which of the local devices to use. The attachment is downloaded to the display *device indicated by the host* in a *one-directional, one-time* link for a *close ended* data download.

Thus the combination of Fano, Ortez and Mousseau fails to teach or even suggest rerouting, wherein the rerouting involves *open ended – that is streaming - and bi-directional* communication and where the rerouting comprises:

> "setting up a bidirectional communication link between said mobile communication device and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile electronic equipment to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile electronic equipment, *said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction,*".

In view of the above it is believed that claim 1 is allowable.

The same amendment has been made to the remaining independent claims.

Claim 30 and new claim 39 teach that the streaming data that is sent in the two directions is video. The prior art does not teach *video data* sent in *two directions* of a bidirectional link between a mobile device and a target device.

Claims 16 and 17 are amended to recite multiple channels for routing data to different surrounding devices.

The remaining claims are believed to be allowable as based on allowable main claims.

In view of the above amendments and remarks it is respectfully submitted that claims 1-39 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56,437
Telephone: 718.246.8482

Date: April 22, 2010

Electronic Patent Application Fee Transmittal

Application Number:	10347388
Filing Date:	21-Jan-2003
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Jason Harris Rosenblum
Attorney Docket Number:	25068

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	1	26	26
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	2251	1	65	65
Miscellaneous:				
			Total in USD ($)	**91**

Electronic Acknowledgement Receipt

EFS ID:	7464004
Application Number:	10347388
International Application Number:	
Confirmation Number:	5659
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum
Filer Authorized By:	
Attorney Docket Number:	25068
Receipt Date:	22-APR-2010
Filing Date:	21-JAN-2003
Time Stamp:	10:14:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$91
RAM confirmation Number	9654
Deposit Account	501407
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		25068_Res_to_OA_dated_23_Dec_2009.pdf	60851 e526a19300a0ec2f22537fed816a76d21e0c5ef6	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	12

Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	31494 9ee2e7d3c8bd88de96a9d266783ec3b60c4fbf8d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	92345		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☒ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	375		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	375		TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 04/22/2010

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 39	Minus	** 38	= 1	X $26 =	26	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	26	OR	TOTAL ADD'L FEE	

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/FELICIA JENKINS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☒ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	375		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	375		TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 04/22/2010

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 39	Minus	** 38	= 1	X $26 =	26	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	26	OR	TOTAL ADD'L FEE	

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/FELICIA JENKINS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 07/07/2010

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2473	

MAIL DATE	DELIVERY MODE
07/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendments filed on 04/22/2010 are entered for prosecution. The amendments change the scopes of the previously presented claims. New grounds of rejections are applied to the amended claims as necessitated by the amendments and the action is made FINAL.

Response to Arguments

1. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1-2, 7-11, 12-15, 18, 20, 23-25 and 28-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Fano (US 2002/0133545) in view of Ortiz (US 2002/0058499), Mousseau (US 2008/0043693) and Hesse (US 2007/0285504).

Fano discloses a Mobile Valet system including the following features.

Regarding claim 1, Apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]), comprising: mobile communication device (see mobile valet device 20 shown in Fig. 1), comprising: an announcer device associated with said mobile communication devicet (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said mobile communication device is available to receive rerouting (see "Communication device 74 transmits a request signal 75 for information" recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see "a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device" recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated mobile communication device to identify and determine availability of compatible equipment in the vicinity (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a

sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see “the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…” recited in paragraph [0040]).

Regarding claim 7, wherein said announcer is an active device, operable to transmit at least status information to respective surrounding (see “Communication device 74 transmits a request signal 75 for information” recited in paragraph [0082], that is, a status of waiting for requested information).

Regarding claim 8, wherein said announcer comprises a passive device, carrying at least device identification information (barcode 84 in Fig. 1) for reading by an active scout device (see sensing device 82 in Fig. 1).

Regarding claim 9, wherein said passive device further carries status information of said device (see “bar code tag…used to request...product reviews..." recited in paragraph [0039], wherein product review is considered a status of the product).

Regarding claim 10, wherein said announcer comprises a barcode (see barcode 84 in Fig. 1) and wherein said scout is a barcode reader (sensing capabilities, including...barcodes" recited in paragraph [0030]).

Regarding claim 12, the apparatus further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data (see “The user continues using his mobile device as an input device to provide input to the remote

service provider…The local service provider transmits instructions to another mobile device carried by a staff member of the local service provider…" recited in paragraph [0061], that is the server being the communication service provider which performs the rerouting of data to the mobile device of the staff member).

Regarding claim 20, a method of rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in paragraph [0040]) comprising: receiving said data at a first device (see "sends back information signal 94, which is then received by the communications device 74…" recited in paragraph [0082]), scouting a vicinity of said first device with a scanning device, said scanning device being associated with said first device (see "Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), and rerouting said data to at least one target device selected from devices in said scanned vicinity found to be available (see "selects the printers to be compared" recited in paragraph [0060], and see "One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services" recited in paragraph [0030]).

Regarding claim 28, a cellular telephone comprises the apparatus of claim 1 (see "cellular phones" recited in paragraph [0076]).

Regarding claim 30, wherein said data comprises video media (see "Instead of reviewing the personalized information only through the "mobile service channel," i.e.,

tiny device screen, the user uses the Mobile Valet to redirect the information to...a nearby video kiosk..." recited in paragraph [0040]).

Regarding claim 35, a method for routing communication data (see “redirect the information to a more suitable service channel or display” recited in paragraph [0040]) comprising: scouting a vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]) of a first mobile device (see mobile valet device 20 shown in Fig. 1), said scanning device being associated with said first mobile device (see sensing device 82 in Fig. 1 being part of the mobile valet device 20).

Regarding claim 36, routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available (see “selects the printers to be compared” recited in paragraph [0060], and see “One can point a Mobile Valet device to a myriad of objects with ID tags and receive supporting services” recited in paragraph [0030]), said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device (see bidirectional links between the device 20 with servers 75 and 80 as well as the bidirectional links between the device 20 with surrounding devices having tags 78 and 84 as shown in Fig. 1).

Fano does not disclose the following features, regarding claim 1, scout device also determine the availability of the compatible equipment, wherein said scout device is operable to determine media type requirements of said compatible equipment; and

reroute data from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile equipment and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction; regarding claim 2, a user interface associated with said device for allowing a user to select between available compatible equipment to reroute data thereto; regarding claim 11, an outgoing multimedia transmitter for locally directing rerouted media to a selected device; regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure; regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network; regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network; regarding claim 18, a device database for storing compatibility data of different equipment type; regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device; wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment; rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity, said rerouting comprises setting up a bidirectional data link between said target device and said mobile device, said

bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction; regarding claim 23, carrying out selection between devices found to be available, via a user interface; regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile; regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings; regarding claim 29, wherein said data comprises a cellular telephone call; regarding claim 30, wherein said streaming data sent in both said first direction and said second direction comprises video data; regarding claim 31, a distributed system comprising more than one apparatus according to claim 1, in which: the scout device on a first apparatus is configured to detect an announcer device on a second apparatus; the first apparatus is configured to forward data to the second apparatus; and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity; regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device; regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses; regarding claim 34, wherein the second apparatus is configured to send rerouting

control data, including a return address, with said data; regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device via a bidirectional link set up between said mobile device and said target device, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction; wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claim 1, scout device (as shown in Fano) also determine the availability of the compatible equipment (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the availability of the device); and reroute data from said mobile equipment to a selected one of said surrounding equipment (see “when a WD is providing data directly to a DRD” recited in paragraph [0059]; and see “Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be

via a network 12 based on commands from a WD 6" recited in the abstract), wherein said rerouting comprises setting up a bidirectional communication link between said mobile communication device and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]; also see "DRD methods can be included in…telephony, video monitors, conferencing and other multi-media enabled devices" recited in paragraph [0017]; each of these applications uses bidirectional streaming of audio and/or video data).

Regarding claim 2, a user interface (see "user interface" recited in paragraph [0048]) associated with said device for allowing a user to select between available compatible equipment to reroute data thereto (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 11, the apparatus further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device (see “the WD providing data directly to a DRD via IR or RF communication” recited in paragraph [0056], wherein the data refers to "multimedia data" as shown in paragraph [0004]).

Regarding claim 13, apparatus further comprising control functionality operable to carry out said rerouting through locally available network infrastructure (see “DRDs can receive data directly from WDS and/or through networks (e.g., wireless, Internet, intranet, etc." recited in paragraph [0046]).

Regarding claim 14, wherein said data is an incoming multimedia communication received from a cellular network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 15, wherein said data is an incoming multimedia communication received from a communication network (see “voice and video services over cellular networks” recited in paragraph [0006]).

Regarding claim 18, the apparatus further comprising a device database for storing compatibility data of different equipment type (see “The WD can be programmed/provided with unique control functions and/or signals applicable to a particular DRD” recited in paragraph [0050]).

Regarding claim 20, through with scanning device determining availability of other devices in the vicinity of said first device (see block 112 in Fig. 12 “Is DRD available?”, where the DRD can be considered the server or the surrounding equipments as shown in Fano’s invention, and that Ortiz shows the step of checking the

availability of the device); rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity (see “when a WD is providing data directly to a DRD” recited in paragraph [0059]; and see “Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6” recited in the abstract), said rerouting comprises setting up a bidirectional data link between said target device and said mobile device, said bidirectional link having a first link direction from said mobile device to said target device and a second link direction from said target device to said mobile device, said bidirectional link carrying a multimedia data stream in both of said first link direction and said second link direction between said first mobile device and said selected target device (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]; also see “DRD methods can be included in…telephony, video monitors, conferencing and other multi-media enabled devices” recited in paragraph [0017]; each of these applications uses bidirectional streaming of audio and/or video data).

Regarding claim 23, carrying out selection between devices found to be available, via a user interface (see "The user can choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Regarding claim 24, carrying out selection between devices found to be available, based on a predetermined user profile (see "DRD 7 selection can be based on WD 6 location and/or user profile information" recited in the abstract).

Regarding claim 25, wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings (see Fig. 3 memory 36, which includes the user profile).

Regarding claim 35, through said scanning device determining availability of other devices in the vicinity of said first mobile device (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device) for receiving of bidirectional streaming data directed from said mobile device (see "when a WD is providing data directly to a DRD" recited in paragraph [0059]; and see "Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6" recited in the abstract) via a bidirectional link set up between said mobile device and said target device, said

bidirectional link having a first link direction from said mobile device to said target device and a second link direction from said target device to said mobile device, said bidirectional link carrying a multimedia data stream in both of said first link direction and said second link direction between said first mobile device and said selected target device (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]; also see “DRD methods can be included in…telephony, video monitors, conferencing and other multi-media enabled devices” recited in paragraph [0017]; each of these applications uses bidirectional streaming of audio and/or video data).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claim 1, wherein said scout device is operable to determine media type requirements of said compatible equipment (see “The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 20, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment (see “The attachment

displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Regarding claim 29, wherein said data comprises a cellular telephone call (see "voice attachments" that could be redirected to a "telephone" recited in paragraph [0016], via a mobile device such as "cellular telephones" as recited in paragraph [0004]).

Regarding claim 31, a distributed system (see Fig. 6) comprising more than one apparatus according to claim 1 (see claim 1 rejection), in which: the scout device on a first apparatus (the redirector of the host system 202) is configured to detect an announcer device on a second apparatus (the mobile device 214B); the first apparatus is configured to forward data to the second apparatus (see "The redirector component 202B of the host system 202B also sends the datagram 200A…to the mobile device 214B); and the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]).

Regarding claim 32, wherein the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third device (see "mobile device 214 will…find an attachment displayer 216 within its vicinity to process the attachment 200B…" recited in paragraph [0073]; that is, the mobile device allows the forwarding of the attachment data to the attachment displayer).

Regarding claim 33, wherein data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses (see Fig. 6, wherein the redirecting involves the Internet 208 and the relay system 210, which includes multiple intermediate apparatuses).

Regarding claim 34, wherein the second apparatus is configured to send rerouting control data, including a return address, with said data (see "…electronic address…The mobile device then processes this information regarding the attachment displayers 216, and sends the host system 202 an attachment displayer choice to use with the attachment 200B. The attachment component 202C of the host system receives the attachment displayer choice from the mobile device 214B, and will then send the attachment 200B to the chosen attachment displayer either through the wireless network 212, directly through the Internet 208, via a LAN connection, via a telephone or cellular connection, or via any other type of connection as specified by the information provided from the chosen attachment displayer 216" recited in paragraph [0073], that is, the mobile device 214 sends the attachment displayer information back to the host, which includes the electronic address of the attachment displayer).

Regarding claim 35, wherein the availability is determined based, at least partly, on media requirements of said compatible equipment, and media type of said communication data (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Hesse discloses a system for conferencing among governed and external participants.

Regarding claim 1, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction (Ortiz above shows the bidirectional communication between the DRD and the WD may involve telephony/video conferencing; Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line"; also see Fig. 1, wherein conference participant station 105 may be considered the DRD and the Hub 108 may be considered the WD that directs the data to the DRD; paragraph [0031] shows that Hesse's system may be wireless).

Regarding claim 20, said bidirectional link having a first link direction from said mobile device to said target device and a second link direction from said target device to said mobile device, said bidirectional link carrying a multimedia data stream in both of said first link direction and said second link direction between said first mobile device and said selected target device (Ortiz above shows the bidirectional communication between the DRD and the WD may involve telephony/video conferencing; Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line"; also see Fig. 1, wherein conference participant station 105 may

be considered the DRD and the Hub 108 may be considered the WD that directs the data to the DRD; paragraph [0031] shows that Hesse's system may be wireless).

Regarding claim 30, wherein said streaming data sent in both said first direction and said second direction comprises video data (Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line").

Regarding claim 35, said bidirectional link having a first link direction from said mobile device to said target device and a second link direction from said target device to said mobile device, said bidirectional link carrying a multimedia data stream in both of said first link direction and said second link direction between said first mobile device and said selected target device (Ortiz above shows the bidirectional communication between the DRD and the WD may involve telephony/video conferencing; Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line"; also see Fig. 1, wherein conference participant station 105 may be considered the DRD and the Hub 108 may be considered the WD that directs the data to the DRD; paragraph [0031] shows that Hesse's system may be wireless).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano using features, as taught by Ortiz, Mousseau Hesse, in order to redirect the data to a more suitable service channel and in order to provide video conferencing to the participants (see abstract of Hesse).

5. Claim 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau and Hesse as applied to claim 1 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz, Mousseau and Hesse disclose the claimed limitations.

Fano, Ortiz, Mousseau and Hesse do not disclose the following features: regarding claim 3, wherein said scout device is operable to determine media type requirements of said compatible equipment, the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 3, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai “Media formats supported by the client which can be used for choosing and delivering the correct data format…” recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that accords with

said determined media type requirements (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Regarding claim 4, wherein a plurality of types corresponds to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer (see "Typical delivery properties chosen by the user, through a conventional graphical user interface…can include parameters such as…Media formats preferred to be used…" recited in column 4, line 11-27).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Hesse using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

6. Claim 5 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau and Hesse as applied to claim 1 and 20 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz, Mousseau and Hesse disclose the claimed limitations.

Ortiz also shows the following feature: regarding claim 27, determining availability of other devices in the vicinity of said target device (see "The user can

choose to render data at the DRD 7 suggested by the network. Several DRDs can be identified by the network 28 for selection by the WD user" recited in paragraph [0049]).

Fano, Ortiz, Mousseau and Hesse do not disclose the following features: regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations; regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device; regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 5, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 26, selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46).

Regarding claim 27, rerouting said communication to at least one further target device selected from devices found to be available (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line

45-46, that is, can reroute the data to more than one target device, or a further target device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Hesse using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau, Hesse and Sahai (US 6,594,699) as applied to claim 3 above, and further in view of Gottlieb (US 5,854,834).

Fano, Ortiz, Mousseau, Hesse and Sahai disclose the claimed limitations.

Fano, Ortiz, Mousseau, Hesse and Sahai do not disclose the following features: regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 6, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media

transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau, Hesse and Sahai using features, as taught by Gottlieb, in order to allow data to be rerouted to multiple destination devices.

8. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau and Hesse as applied to claim 1 above, and further in view of Proctor (US 2009/0055707).

Fano, Ortiz, Mousseau and Hesse disclose the claimed limitations.

Fano, Ortiz, Mousseau and Hesse do not disclose the following features: regarding claim 16, wherein said streaming data in said first link direction is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment; regarding claim 17, wherein said streaming data is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment.

Proctor discloses a wireless system including the following features.

Regarding claim 16, wherein said streaming data in said first link direction is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment (rejection of claim 1 above shows the directing of the streaming data to the surrounding equipment; Proctor shows the directing via multiple channels in paragraph [0004], which states "to facilitate data transfer for computing application or for

video conferencing applications. In one such proposal, a high rate data signal may be communicated to a receiver over a plurality of parallel traffic channels").

Regarding claim 17, wherein said streaming data is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment (rejection of claim 1 above shows the directing of the streaming data to the surrounding equipment; Proctor shows the directing via multiple channels in paragraph [0004], which states "to facilitate data transfer for computing application or for video conferencing applications. In one such proposal, a high rate data signal may be communicated to a receiver over a plurality of parallel traffic channels").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Hesse using features, as taught by Proctor, in order to "provide high data rate exchanges over a wireless communication system (see Proctor, paragraph [0004]).

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau and Hesse as applied to claim 1 above, and further in view of Gottlieb (US 5,854,834) and Sahai (US 6,594,699).

Fano, Ortiz, Mousseau and Hesse disclose the claimed limitations.

Fano, Ortiz, Mousseau and Hesse do not disclose the following features: regarding claim 19, the apparatus further comprising a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single data to a plurality of respective target devices; and a transformer, associated with said cloner, for

receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

Gottlieb discloses a network information concentrator including the following features.

Regarding claim 19, a media cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of locations (see “This module will also detect any data with multiple destinations and clone as necessary” recited in column 14, line 45-46).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 19, a transformer, associated with said cloner, for receiving the at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device (see “the server 10 performs: asset selection and media data adaptation” recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai’s invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Hesse using features, as

taught by Gottlieb and Sahai, in order to allow data to be rerouted to multiple destination devices.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau and Hesse as applied to claim 20 above, and further in view of Kawamoto (US 2004/0080779).

Fano, Ortiz, Mousseau and Hesse disclose the claimed limitations.

Fano, Ortiz, Mousseau and Hesse do not disclose the following features: regarding claim 21, determining compatibility of said available devices in said vicinity with said data.

Kawamoto discloses a print control method including the following features.

Regarding claim 21, determining compatibility of said available devices in said vicinity with said data (see “determined in step (11) that there is the compatibility” recited in paragraph [0111]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau and Hesse using features, as taught by Kawamoto, in order to determine the supported data formats.

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fano, Ortiz, Mousseau, Hesse and Kawamoto (US 2004/0080779) as applied to claim 21 above, and further in view of Sahai (US 6,594,699).

Fano, Ortiz, Mousseau, Hesse and Kawamoto disclose the claimed limitations.

Fano, Ortiz, Mousseau, Hesse and Kawamoto do not disclose the following features: regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claim 22, carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, Ortiz, Mousseau, Hesse and Kawamoto using features, as taught by Sahai, in order to allow rerouted data to be used at the destination device.

12. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fano in view of Ortiz, Mousseau, Sahai, Gottlieb and Hesse.

Fano discloses a Mobile Valet system including the following features.

Regarding claims 37 and 38, apparatus for rerouting communication data (see "redirect the information to a more suitable service channel or display" recited in

paragraph [0040]), comprising: mobile electronic equipment (see mobile valet device 20 shown in Fig. 1) comprising: an announcer device associated with said first electronic equipment (see communication device 74 and locating device 64 in Fig. 1), and configured for indicating to surrounding equipment (see local server 80 in Fig. 1) that said first electronic equipment is available to receive rerouting (see “Communication device 74 transmits a request signal 75 for information” recited in paragraph [0082]), thereby to enable receipt of rerouted data from said surrounding equipment (see “a local server 80, whereupon the server sends back an information signal 94, which is then received by the communication device” recited in paragraph [0082]), and a scout device associated with said first electronic equipment (see sensing device 82 in Fig. 1), configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity (see “Sensing device 82 is any device capable of sensing a signal or element in the surrounding...and generate a sensing signal response 95..." recited in paragraph [0090], and see "mobile devices gain the ability to sense and interact with the objects around them" recited in paragraph [0035]), thereby to reroute data to one of said surrounding equipment (see “the user uses the Mobile Valet to redirect the information to a more suitable service channel or display…” recited in paragraph [0040]).

Fano does not disclose the following features, regarding claim 37, reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment and said mobile electronic equipment,

said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction; and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media cloner, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer; regarding claim 38, scout device also determine the availability of the compatible equipment, and wherein said scout device is operable to determine media type requirements of said compatible equipment; a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer; said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction; regarding claim 39, wherein said streaming data sent in both said first direction and said second direction comprises video data.

Ortiz discloses a system for brokering data between wireless devices and data rendering devices.

Regarding claims 37 and 38, scout device (as shown in Fano) reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment and said mobile electronic equipment (see “when a WD is providing data directly to a DRD” recited in paragraph [0059]; and see “Data for rendering at a DRD 7 can be selected using a WD 6 and can be provided to a DRD 7 and/or manipulated at a DRD 7 based on data delivery and/or manipulation commands from a WD 6 at a DRD 7 , or delivery can be via a network 12 based on commands from a WD 6” recited in the abstract), said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction (see Fig. 5 and paragraph [0059] of Ortiz, which shows that the wireless device (WD) obtain communication with the data rendering device (DRD), the link is bidirectional since the WD is allowed to transmit data to the DRD and the DRD is capable of verifying the received data to the WD; the data is carried can be streaming media data, as shown in paragraph [0046], which recites that "data generally refers to text, voice, graphics, and/or video" and see "real-time services...such as video-based services" recited in paragraph [0006]; also see “DRD methods can be included in…telephony, video

monitors, conferencing and other multi-media enabled devices" recited in paragraph [0017]; each of these applications uses bidirectional streaming of audio and/or video data); and also determine the availability of the compatible equipment (see block 112 in Fig. 12 "Is DRD available?", where the DRD can be considered the server or the surrounding equipments as shown in Fano's invention, and that Ortiz shows the step of checking the availability of the device).

Mousseau discloses a system for redirecting message attachments between a host system and a mobile data communication device.

Regarding claims 37 and 38, wherein said scout device is operable to determine media type requirements of said compatible equipment (see "The attachment displayer will then send back...to the mobile device...information pertaining to their...type of attachment files they can handle" recited in paragraph [0073]).

Sahai discloses a system for capability based multimedia streaming over a network including the following features.

Regarding claims 37 and 38, wherein said scout device (see Fano, "The mobile device is pointed at the printer and...the identification of the printers are provided to the user..." recited in paragraph [0060], which shows that the scout device is operable to determine information relating to the compatible equipment) is operable to determine media type requirements of said compatible equipment (see Sahai "Media formats supported by the client which can be used for choosing and delivering the correct data format…" recited in column 3, line 57-60), the apparatus further comprising a media transformer, associated with said scout device, for transforming media into a form that

accords with said determined media type requirements (see "the server 10 performs: asset selection and media data adaptation" recited in column 4, line 33-34; that is, the user device, which reroutes the data to the compatible device is acting as the server in Sahai's invention, and by performing mediate data adaptation, the media is transformed into a compatible media type with the compatible device).

Gottlieb discloses a network information concentrator including the following features.

Regarding claims 37 and 38, a media cloner, associated with said media transformer, for making multiple copies of incoming data, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations (see "This module will also detect any data with multiple destinations and clone as necessary" recited in column 14, line 45-46), at least some of said multiple copies being redirected via said media transformer (see Sahai, step 36 in Fig. 2, which shows that all media are formatted and adapted via the media transform prior to being sent).

Hesse discloses a system for conferencing among governed and external participants.

Regarding claims 37 and 38, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction (Ortiz above shows the bidirectional communication between the DRD and the WD may involve

telephony/video conferencing; Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line"; also see Fig. 1, wherein conference participant station 105 may be considered the DRD and the Hub 108 may be considered the WD that directs the data to the DRD; paragraph [0031] shows that Hesse's system may be wireless).

Regarding claim 39, wherein said streaming data sent in both said first direction and said second direction comprises video data (Hesse discloses, in paragraph [0164], that "a video conference station...is linked to ...a bidirectional digital line").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fano, using features as taught by Ortiz, Mousseau, Sahai, Gottlieb and Hesse, in order to allow rerouted data to be used at the destination device and in order to allow data to be rerouted to multiple destination devices and in order to redirect the data to a more suitable service channel and in order to provide video conferencing to the participants (see abstract of Hesse).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

/Ju-Tai Kao/
Acting Examiner of Art Unit 2473

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473

Notice of References Cited	Application/Control No. 10/347,388	Applicant(s)/Patent Under Reexamination SHMUELI ET AL.	
	Examiner JUTAI KAO	Art Unit 2473	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2007/0285504	12-2007	Hesse, Thomas H.	348/14.08
*	B	US-2009/0055707	02-2009	Proctor, JR., James A.	714/758
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009	07/02/2010					
	1	✓	✓	✓	✓					
	2	✓	✓	✓	✓					
	3	✓	✓	✓	✓					
	4	✓	✓	✓	✓					
	5	✓	✓	✓	✓					
	6	✓	✓	✓	✓					
	7	✓	✓	✓	✓					
	8	✓	✓	✓	✓					
	9	✓	✓	✓	✓					
	10	✓	✓	✓	✓					
	11	✓	✓	✓	✓					
	12	✓	✓	✓	✓					
	13	✓	✓	✓	✓					
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	31	✓	✓	✓	✓					
	32	✓	✓	✓	✓					
	33	✓	✓	✓	✓					
	34	✓	✓	✓	✓					
	35	✓	✓	✓	✓					
	36	✓	✓	✓	✓					

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Apple EX1002 Page 436

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009	07/02/2010					
	37		✓	✓	✓					
	38		✓	✓	✓					
	39				✓					

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Apple EX1002 Page 437

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search, see attached search history	10/23/2008	JK
EAST text search, see attached search history	07/02/2010	JK

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S46	236	((bi adj direction$4) or bidirection$3) near6 streaming	US-PGPUB; USPAT	OR	ON	2010/06/29 13:19
S49	27	S48 and (mobile or wireless $4)	US-PGPUB; USPAT	OR	ON	2010/06/29 13:20
S48	100	S46 and S47	US-PGPUB; USPAT	OR	ON	2010/06/29 13:20
S47	4315405	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2010/06/29 13:20
S50	6007	((bi adj direction$4) or bidirection$3) near6 (multimedia or audio or voice or video)	US-PGPUB; USPAT	OR	ON	2010/06/29 14:12
S55	27	S54 not S49	US-PGPUB; USPAT	OR	ON	2010/06/29 14:13
S54	27	S53 and S52	US-PGPUB; USPAT	OR	ON	2010/06/29 14:13
S53	32226	(multimedia or audio or voice or video) near7 streaming	US-PGPUB; USPAT	OR	ON	2010/06/29 14:13
S52	376	S51 and S47	US-PGPUB; USPAT	OR	ON	2010/06/29 14:13
S51	910	S50 same (mobile or wireless $4)	US-PGPUB; USPAT	OR	ON	2010/06/29 14:13
S56	1	forward$4 near7 (video or audio) near6 (mobile or wireless) same (bidirectional or (bi adj directional))	US-PGPUB; USPAT	OR	ON	2010/07/02 09:38
S60	10	S58 and S59	US-PGPUB; USPAT	OR	ON	2010/07/02 09:39
S59	4315613	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2010/07/02 09:39

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S58	32	forward$4 near7 (video or audio) near6 (mobile or wireless) and (bidirectional or (bi adj directional))	US-PGPUB; USPAT	OR	ON	2010/07/02 09:39
S57	339	forward$4 near7 (video or audio) near6 (mobile or wireless)	US-PGPUB; USPAT	OR	ON	2010/07/02 09:39
S62	23	S61 and S59	US-PGPUB; USPAT	OR	ON	2010/07/02 09:45
S61	37	(video near3 conferenc$4) same telephon$4 same bidirection$2	US-PGPUB; USPAT	OR	ON	2010/07/02 09:45
S66	81	S64 and (wireless or mobile)	US-PGPUB; USPAT	OR	ON	2010/07/02 10:14
S65	315	S57 and (wireless or mobiel)	US-PGPUB; USPAT	OR	ON	2010/07/02 10:14
S64	131	S63 and S59	US-PGPUB; USPAT	OR	ON	2010/07/02 10:14
S63	194	video near3 conferenc$4 same (plural$4 or multiple) near3 channel	US-PGPUB; USPAT	OR	ON	2010/07/02 10:14

EAST Search History (Interference)

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7/2/2010 3:17:28 PM
C:\Documents and Settings\Jkao\My Documents\EAST\Workspaces\10347388 new.wsp

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PTO/SB/30 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**10/347,388**
Filing Date	**January 21, 2003**
Examiner Name	**Jutai KAO**
First Named Inventor	**Oded SHMUELI**
Group Art Unit	**2473**
Confirmation No.:	**5659**
Attorney Docket Number	**25068**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) (PTO/SB/29) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA.* See *Changes to Application Examination and Provisional Application Practice*, Final Rule, 65 *Fed. Reg.* 50092 (Aug. 16, 2000); Interim Rule, 65 *Fed. Reg.* 14865 (Mar. 20, 2000), 1233 *Off. Gaz. Pat. Office* 47 (Apr. 11, 2000), which established RCE practice.

1. **Submission required under 37 C.F.R. § 1.114**
   - a. ☐ Previously submitted
     - i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____
       (Any unentered amendment(s) referred to above will be entered).
     - ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   - b. ☒ **Enclosed**
     - **i. ☒ Amendment/Reply**
     - ii. ☐ Affidavit(s)/Declaration(s)
     - iii. ☐ Information Disclosure Statement (IDS)
     - **iv. ☒ Other <u>two (2) Month Extension fee</u>**
     - **v. ☐ Other**
2. **Miscellaneous**
   - a. ☐ Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 C.F.R. § 1.17(i) **required**)
   - b. ☐ Other _____
3. **Fees** The RCE fee under 37 C.F.R. § 1.17(e) is required by 37 C.F.R. § 1.114 when the RCE is filed.

☒ Applicant is entitled to Small Entity Status under 37 CFR 1.9 and 37 CFR 1.27

For:	*Claims after Amendment*	*Highest Claims Previously Paid*	*SMALL ENTITY* RATE	FEE	OTHER THAN A SMALL ENTITY RATE	FEE
Request for Continued Examination (RCE)			1	$ 405		$
Multiple Dependent Claims			0 x $ 195	$ 0		$
Total Claims*	36	39	0 x $ 26	$ 0		$
Independent Claims*	6	5	1 x $110	$ 110		$
* (If the difference in Column 1 is less than "0", enter "0" in Column 2)			*TOTAL*	<u>$515.</u>	*TOTAL*	<u>$</u>

☒ The Commissioner is hereby authorized to charge $515.- filing fees to Deposit Account No. 50-1407. In the event additional fees are required, please charge these additional fees to Deposit Account No. 50-1407. In the event of overpayment, please credit Deposit Account No. 50-1407.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Name (Print/Type)	Jason H. Rosenblum	*Registration No. (Attorney/Agent*	56437
Signature	/Jason H. Rosenblum/	*Date*	**December 6, 2010**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§		
		§		
	Oded SHMUELI et al	§	Confirmation No.:	5659
		§		
Serial No.:	10/347,388	§		
		§		
Filed:	January 21, 2003	§	Group Art Unit:	2473
		§		
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§		
		§	Attorney Docket:	**25068**
		§		
Examiner:	Jutai KAO	§		

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE AFTER FINAL

Sir:

This is in response to the United States Patent and Trademark Final Office Action mailed July 7, 2010, which response is being made on or before December 7, 2010, and for which a two-month extension of time fee is due.

A Request for Continued Examination (RCE) is also enclosed herewith.

Applicant submits this response for entry into the record, in which:

Amendments to the Claims begin on **page 2**.

Remarks begin on **page 11**.

Please amend the above-identified application as follows:

In the Claims:

1. (Currently Amended) Apparatus for rerouting communication data, comprising:

a mobile communication device comprising:

an announcer device associated with said mobile communication device, and configured for indicating to surrounding equipment that said mobile communication device is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said mobile communication device, configured for scanning surroundings of said associated mobile communication device to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile communication device to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile communication device and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer and

a media cloner, associated with said media transformer, for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect said single incoming data stream to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

2. (Original) Apparatus according to claim 1, further comprising a user interface associated with said scout device for allowing a user to select between available compatible equipment to reroute data thereto.

3 - 6 (Cancelled)

7. (Original) Apparatus according to claim 1, wherein said announcer is an active device, operable to transmit at least status information to respective surroundings.

8. (Original) Apparatus according to claim 1, wherein said announcer comprises a passive device, carrying at least device identification information for reading by an active scout device.

9. (Original) Apparatus according to claim 8, wherein said passive device further carries status information of said device.

10. (Original) Apparatus according to claim 8, wherein said announcer comprises a barcode and wherein said scout is a barcode reader.

11. (Original) Apparatus according to claim 1, further comprising an outgoing multimedia transmitter for locally directing rerouted media to a selected device.

12. (Original) Apparatus according to claim 1, further comprising control functionality operable to inform a communication service provider of a desired rerouting, thereby to enable said communication service provider to reroute said data.

13. (Original) Apparatus according to claim 1, further comprising control functionality operable to carry out said rerouting through locally available network infrastructure.

14. (Original) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a cellular communication network.

15. (Previously Presented) Apparatus according to claim 1, wherein said data is an incoming multimedia communication received from a communication network.

16. (Previously Presented) Apparatus according to claim 1, wherein said streaming data in said first link direction is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment .

17. (Previously Presented) Apparatus according to claim 1, wherein said streaming data is directable via multiple channels to each of a plurality of surrounding devices of said surrounding equipment.

18. (Original) Apparatus according to claim 1, further comprising a device database for storing compatibility data of different equipment types.

19. (Previously Presented) Apparatus according to claim 1, further comprising:

a cloner for making multiple copies of incoming data, thereby to enable said apparatus to redirect single incoming data to a plurality of respective target devices, and

a transformer, associated with said cloner, for receiving at least one of said multiple copies of said incoming data, and transforming said data into a form that accords with a determined media type requirement of a respective target device.

20. (Currently Amended) A method of rerouting communication data comprising:

receiving said data at a first mobile device,

scouting a vicinity of said first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and

rerouting said data from said mobile device to at least one target device selected from devices in said scanned vicinity found to be available, said rerouting comprising setting up a bidirectional data link between said target device and said mobile device, said bidirectional data link having a first direction from said mobile device to said target device and a second direction from said target device to said mobile device, said bidirectional link being capable of carrying a multimedia datastream in both of said first direction and said second direction between said first mobile device and said selected target device

transforming media into a form that accords with said determined media type requirements, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer and

making multiple copies of incoming data to redirect a single incoming communication to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

21. (Original) The method of claim 20, further comprising determining compatibility of said available devices in said vicinity with said data.

22. (Original) The method of claim 21 further comprising carrying out media type transformation from a media type of said communication to at least one media type compatible with a selected device.

23. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, via a user interface.

24. (Original) The method of claim 20 comprising carrying out selection between devices found to be available, based on a predetermined user profile.

25. (Original) The method of claim 24 wherein said profile is obtained from one of a group comprising device memory, the local environment, a local network, user provided settings, and server provided settings.

26. (Original) The method of claim 20 comprising selecting a plurality of devices to reroute said communication thereto, and cloning said communication for each selected device.

27. (Original) The method of claim 20, further comprising determining availability of other devices in the vicinity of said target device, and

rerouting said communication to at least one further target device selected from devices found to be available.

28. (Previously Presented) A cellular telephone comprising the apparatus of claim 1.

29. (Previously Presented) The method of claim 20 wherein said data comprises a cellular telephone call.

30. (Currently Amended) The method of claim 20 wherein said streaming data sent in both said first direction and said second direction comprises video media.

31. (Previously Presented) A distributed system comprising more than one apparatus according to claim 1, in which:

the scout device on a first apparatus is configured to detect an announcer device on a second apparatus;

the first apparatus is configured to forward data to the second apparatus; and

the scout device on the second apparatus is configured for scanning surroundings of the second apparatus to identify and determine availability of compatible equipment in the vicinity.

32. (Previously Presented) The distributed system according to claim 31 in which the scout device on the second apparatus is configured to locate an announcer device on a third apparatus and to forward said data to the third apparatus.

33. (Previously Presented) The distributed system according to claim 32 in which data may be rerouted over a plurality of intermediate apparatuses, thereby producing a group of communicating apparatuses.

34. (Previously Presented) The distributed system according to claim 32 in which the second apparatus is configured to send rerouting control data, including a return address, with said data.

35. (Currently Amended) A method of routing communication data comprising:

scouting a vicinity of a first mobile device with a scanning device, said scanning device being associated with said first mobile device,

through said scanning device determining availability of other devices in the vicinity of said first mobile device for receiving of bidirectional streaming data directed from said mobile device via a bidirectional link set up between said mobile device and said target device, said bidirectional link having a first data streaming direction from said mobile device to said target device and a second data streaming direction from said target device to said mobile device, wherein the availability is determined based, at least partly, on media type requirements of said compatible equipment, and media type of said communication data, the method further comprising streaming data in both of said first direction and said second direction

transforming media into a form that accords with said determined media type requirements, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user

to select one of said media type requirements for transforming at said media transformer and

making multiple copies of a single incoming data stream, thereby to redirect said single incoming data stream to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

36. (Previously Presented) The method of claim 35 and further comprising routing said communication data to at least one target device selected from devices in said scanned vicinity found to be available, said routing comprising setting up a bidirectional data link between said first mobile device and said selected target device.

37. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile electronic equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of said surrounding equipment and said mobile electronic equipment said bidirectional link having a first data streaming direction from said mobile equipment to said selected one of said surrounding equipment and a second data streaming direction from said selected one of said surrounding equipment to said mobile equipment, said bidirectional link being capable of carrying a datastream in said first direction and in said second direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media cloner, for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect ~~a~~ said single incoming ~~communication~~data stream~~,~~ to a plurality of locations, at least some of said multiple copies being redirected via said media cloner.

38. (Currently Amended) Apparatus for rerouting communication data, comprising:

mobile electronic equipment comprising:

an announcer device associated with said first electronic equipment, and configured for indicating to surrounding equipment that said associated first electronic equipment is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment;

a scout device associated with said first electronic equipment, configured for scanning surroundings of said associated first electronic equipment to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile equipment to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said selected one of ~~surrouding~~ surrounding equipment and said mobile electronic equipment, said bidirectional link having a first data streaming direction from said mobile equipment to said selected one of said surrounding equipment and a second data streaming direction from said selected one of said surrounding equipment to said mobile equipment, said bidirectional link capable of carrying a datastream in said first direction and in said second direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment;

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements; and

a media cloner, associated with said media transformer, for making multiple copies of a single incoming data stream, thereby to enable said apparatus to redirect a single incoming communication, to a plurality of locations, at least some of said multiple copies being redirected via said media transformer.

39. (Previously Presented) The apparatus of claim 1, wherein said streaming data sent in both said first direction and said second direction comprises video media.

40. (New) Apparatus for rerouting communication data, comprising:

a mobile communication device comprising:

an announcer device associated with said mobile communication device, and configured for indicating to surrounding equipment that said mobile communication device is available to receive rerouting, thereby to enable receipt of rerouted data from said surrounding equipment, and

a scout device associated with said mobile communication device, configured for scanning surroundings of said associated mobile communication device to identify and determine availability of compatible equipment in the vicinity, thereby to reroute data from said mobile communication device to a selected one of said surrounding equipment, wherein said rerouting comprises setting up a bidirectional communication link between said mobile communication device and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile communication device to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile communication device, said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction, and wherein said scout device is operable to determine media type requirements of said compatible equipment; and

a media transformer, associated with said scout device, for transforming media into a form that accords with said determined media type requirements, wherein a plurality of types correspond to said media type requirements, and further comprising a user interface for allowing a user to select one of said media type requirements for transforming at said media transformer.

REMARKS

Claims 1 – 39 are pending.

Claims 1, 20, 35, 37 and 38 are amended herewith.

Claims 3 – 6 are cancelled

New claim 40 is added.

Amendments to the Claims

Claim Rejections

Claims 1 - 39 have been amended to overcome the rejection under 35 USC 103.

The claims were limited in previous responses to the case that redirection is from the mobile device and that the redirection involves setting up a bidirectional link which is between the mobile device and the selected surrounding equipment, wherein the streaming data is provided in both directions of the bidirectional link.

Ortez indeed shows a bidirectional data link which is capable of carrying a datastream. This was accepted in the previous response and applicant does not argue on this point.

However Ortez fails to teach that the bidirectional data link carries out data *streaming* in *both directions* of the link, contrary to the requirements of presently drafted claim 1. On the contrary, Ortez has data streaming in *one* direction, with mere *control* signals and *acknowledgements* (and no streaming data such as e.g., video) traveling in the *other* direction.

Sending acknowledgements as taught in Ortez, does *not* constitute data streaming.

Specifically, Examiner cites paragraph 59 of Ortez. But Paragraph 59 of Ortez teaches streaming of data in the direction of the DRD only. The only data communication sent in the opposite direction is the acknowledgement that the DRD received the data.

Thus Ortez paragraph 59 fails to teach bidirectional data streaming.

Examiner points to Ortez Fig. 5, but Ortez Fig. 5 merely illustrates that there is bi-directional data transfer. There is no teaching of data streaming since the second direction is a mere acknowledgement.

Although the Examiner points to paragraph 17 to import a definition of data into paragraph 59, this importation is respectfully believed to be a misreading of Ortez which would not be countenanced by the skilled person. The definition of data in paragraph 17 refers to the data transfer in the forward direction. It does not refer to the data transfer in the reverse direction since this has already been defined in paragraph 59 – "The DRD can verify to the WD that it received the data." That is to say the data in paragraph 17 defines the forward direction "the data" and not the reverse direction – the verification.

Based on the above the Examiner's argument that Ortez teaches bidirectional data streaming cannot be accepted.

Based on the above, the combination of Fano, Mousseau, Ortiz and Hesse fails to teach the features of claim 1, and in particular the feature of bidirectional data streaming.

Examiner appears to acknowledge this point and thus brings in Hesse.

The Examiner, in his discussion of Hesse, begins with the unsupported assertion that "Ortez above shows the bidirectional communication between the DRD and the WD may involve telephony/video conferences". As discussed above this appears to be based on the misunderstanding in Ortez that "data" as defined in Ortez paragraph 17 defines the verifying in paragraph 59 of Ortez. It does not. The definitions in paragraph 17 of Ortez define only the forward direction.

Given that Ortez does not teach bidirectional data streaming, the question is immediately raised about the relevance of Hesse. The present invention relates to the concept of arriving at a space with a mobile telephone, receiving a datastream at the mobile telephone, identifying one or more devices in the room that can act as receiving devices for the datastream and then forwarding the datastream to the available device with two way datastream communication back to the origin. Hesse contributes nothing to this invention as his system is a preconfigured system in which fixed devices in a conference room carry out a single set task of supporting video

conferencing. There is no ad hoc element in Hesse and thus the skilled person would ignore Hess when considering the invention.

Although it is true that the Examiner obtains the ad hoc element – finding available devices etc, from Fano, it is not obvious to combine a bidirectional streaming data link from a preconfigured arrangement of devices with network cards, to the ad hoc arrangement of the other citations. It was not known to include a bidirectional data link in an ad hoc arrangement including a mobile telephone as the initial datastream receiving device and then use that mobile telephone as a relay through that bidirectional data link.

Specifically, applicant is arguing that since the invention relates to ad hoc communications between devices, Hesse, which teaches a fixed and pre-configured system – the opposite of ad hoc, is not in the field of endeavor of the invention. Regarding art that is not in the field of invention the boards of appeal have laid down an analogous art test, as follows:

The analogous-art test requires that the board show that a reference is either in the field of the applicant's endeavor *or is reasonably pertinent to the problem with which the inventor was concerned* in order to rely on that reference as a basis for rejection. *In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006) (citing *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir.1992)). *See also In re ICON Health and Fitness, Inc.*, 496 F.3d 1374 (Fed. Cir. 2007); *In re Bigio*, 381 F.3d 1320 (Fed. Cir. 2004); and *In re Clay*, 966 F.2d 656 (Fed. Cir. 1992).

The problem that the invention was concerned with was how to provide ad hoc data communication to allow streaming data to identify a suitable terminal, reach that terminal and use that terminal. The solution which the inventor found was to make the mobile telephone a relay device for the identified terminal, and in order to be a relay it needed a bidirectional data link.

A preconfigured system with a bidirectional data link provides the skilled person with no information as to how to solve his problem. No-one is arguing that bidirectional communication is not known for pre-configured data communications. But ad hoc systems are a completely different ball-game and simply seeing bidirectional communication in a pre-configured system is not enough to convince the skilled person that it can be achieved in an ad-hoc system.

Thus the combination of Fano, Ortez Hesse and Mousseau fails to teach or even suggest rerouting in an ad hoc system, wherein the rerouting involves *open ended – that is streaming - and bi-directional* communication and where the rerouting comprises:

> "setting up a bidirectional communication link between said mobile communication device and said selected surrounding equipment, said bidirectional link having a first link direction from said mobile electronic equipment to said selected surrounding equipment and a second link direction from said selected surrounding equipment to said mobile electronic equipment, *said bidirectional link carrying streaming data over both directions of said first link direction and said second link direction,*".

In view of the above alone it is believed that claim 1 is allowable.

Nevertheless applicant has added to claim 1, 27, and new claim 40 the feature of a data transformer.

The data transformer is rejected over Sahai. However Sahai is not analogous art to the ad hoc problem of the present invention for the same reasons given in respect of _Hesse. Sahai relates to a standard server client arrangement and therefore suggests to the skilled person nothing in terms of how to manage an ad hoc communication problem in which a user enters a room with a communication device of his own and considers how to create a network from the newly encountered devices in the room.

On this basis claims 1, 20, 35, 38 and 40 are believed to be allowable.

Claims 1, 20, 35 and 38 have the additional feature of data cloning of a single data stream into multiple data streams for multiple devices.

Against this feature Examiner cites Gottlieb column 14 lines 44 and 45, "this module will detect any data with multiple destinations and clone as necessary". That is to say, Gottlieb teaches that incoming data packets are checked for multiple addresses. If they have multiple addresses then a cloned version is sent to each destination address.

Of course there are *no such multiple addresses* in the packet in the ad hoc system of the present invention. The *only* destination address in the packets of the present invention is that of the *mobile* device. The data stream was initially sent to the

mobile device, and it is the mobile device which *decides* independently to clone because it has ad hoc identified multiple devices to receive the datastream.

Claim 1 already defines that the terminals are only selected *at* the mobile device. Therefore it is *intrinsic* to claim 1 that the incoming data stream *cannot* have multiple addresses.

Gottlieb teaches or suggests *nothing* about cloning of data which does *not* have multiple addresses contained in the data packet.

The claim teaches data packets which do not have multiple addresses since the claim teaches that the selection of destination devices is made at the mobile telephone, and therefore the argument relies on a feature that is contained in the claim.

Therefore, for this reason alone, claims 1, 20, 35, and 38 are believed to be allowable.

The remaining claims are believed to be allowable as based on allowable main claims.

In view of the above amendments and remarks it is respectfully submitted that claims 1 - 40 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56,437
Telephone: 718.246.8482

Date: December 6, 2010

Enclosure:

- Request for Continued Examination (RCE)

Electronic Patent Application Fee Transmittal

Application Number:	10347388
Filing Date:	21-Jan-2003
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Jason Harris Rosenblum
Attorney Docket Number:	25068

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Independent claims in excess of 3	2201	1	110	110
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	2252	1	245	245
Miscellaneous:				
Request for continued examination	2801	1	405	405
		Total in USD ($)		**760**

Electronic Acknowledgement Receipt

EFS ID:	8968963
Application Number:	10347388
International Application Number:	
Confirmation Number:	5659
Title of Invention:	Routing of data including multimedia between electronic devices
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum
Filer Authorized By:	
Attorney Docket Number:	25068
Receipt Date:	06-DEC-2010
Filing Date:	21-JAN-2003
Time Stamp:	09:39:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$760
RAM confirmation Number	9334
Deposit Account	501407
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		25068_Res_to_Final_OA_dated_7_July_2010.pdf	175187 ea9d2b5a139216fbcd0f1d3797a1a8815a4a83d8	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Request for Continued Examination (RCE)	1	1
	Amendment After Final	2	2
	Claims	3	11
	Applicant Arguments/Remarks Made in an Amendment	12	16

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	33162 f5d74088e3e6c346c5fa9b5e0d0aa7c4580408dd	no	2

Warnings:

Information:

Total Files Size (in bytes):	208349

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/347,388	01/21/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	12/06/2010	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 36	Minus	** 39	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 6	Minus	***5	= 1	X $110 =	110	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	110	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/CATHERINE d. SMITH/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08a (08-03)
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(*use as many sheets as necessary*)

Sheet	1	of	2	Attorney Docket Number	25068

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Art Unit	2473
Examiner Name	KAO Jutai

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Foreign Patent Documents Country Code[3]-Number[4]-Kind Code[5] (*if known*)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [6]

Examiner Signature		Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

PTO/SB/08a (08-03)
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Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Group Art Unit	2473
Examiner Name	KAO Jutai
Attorney Docket Number	25068

Sheet	2	Of	2

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	1	Official Action Dated 17 April 2008 From the US Patent and Trademark Office Re.: Application No. 11/146,130.	

Examiner Signature		Date Considered	

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[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:		§	
		§	
	SHMUELI Oded et al	§	
		§	Confirmation No.: 5659
Serial No.:	10/347,388	§	
		§	
Filed:	January 21, 2003	§	Group Art Unit: 2473
		§	
For:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES	§	
		§	Attorney Docket: 25068
Examiner:	KAO Jutai	§	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited, other than U.S. Patents and U.S. patent applications. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56, 37 CFR 1.97 and 37 CFR 1.98. The Examiner is requested to make these citations of official record in this application.

The undersigned states:

A. NO CERTIFICATION OR FEE DUE

☒ This Information disclosure Statement is being filed within three months of filing a national application or entry of a national phase of an international application; or before the mailing date of a first Office action on the merits of the above-identified application. Accordingly, no fee or Certification is believed due. However, if a fee is due, authorization to deduct such fee from the Deposit Account 501407 of the undersigned is hereby provided.

B. CERTIFICATION

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

C. FEE

☐ Please charge the fee of $180 set forth in 37 CFR 1.17(p) to Deposit Account 501407.

This Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any one or more of the citations listed constitutes prior art as defined by 35 U.S.C. 102.

It is respectfully requested that the Examiner consider the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims, and sign the enclosed form PTO-1449 to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application. Notwithstanding any statements by the Applicant, the Examiner is urged to form his/her own conclusion regarding the relevance of the cited information.

Respectfully submitted,

/Jason H. Rosenblum/

Jason H. Rosenblum
Registration No. 56,437

Date: February 15, 2011

Electronic Acknowledgement Receipt

EFS ID:	9444246
Application Number:	10347388
International Application Number:	
Confirmation Number:	5659
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum/Dorit Handrus
Filer Authorized By:	Jason Harris Rosenblum
Attorney Docket Number:	25068
Receipt Date:	15-FEB-2011
Filing Date:	21-JAN-2003
Time Stamp:	07:25:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	_form1449.pdf	188295 e26234d8016dcb6ed4e5499af43cbdcd1934cac4	no	2

Warnings:	
Information:	

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This is not an USPTO supplied IDS fillable form					
2	Transmittal Letter	USPTOltr.pdf	20361 c6987537b9a8027cff1dea29ec41dfe669a2fcb4	no	2
Warnings:					
Information:					
3	NPL Documents	1-93943.pdf	349515 e76c5b31b99e8fcbe08f6c6789a369ab465b7c48	no	12
Warnings:					
Information:					
			Total Files Size (in bytes):	558171	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

67801 7590 02/18/2011

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER
KAO, JUTAI

ART UNIT	PAPER NUMBER
2473	

DATE MAILED: 02/18/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	05/18/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

67801 7590 02/18/2011
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	05/18/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
KAO, JUTAI	2473	370-328000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 02/18/2011

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2473	

DATE MAILED: 02/18/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 850 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 850 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2473	

All Participants:

(1) *JUTAI KAO*.

(2) *Jason H. Rosenblum (Reg. No. 56,437)*.

Status of Application: *2nd RCE*

(3) _____.

(4) _____.

Date of Interview: *10 February 2011*

Time: *2:00 pm*

Type of Interview:
☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☐ No
If Yes, provide a brief description: .

Part I.

Rejection(s) discussed:
Claims 37 and 40

Claims discussed:
37 and 40

Prior art documents discussed:

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:
Cancel claims 37 and 40 in order to place the application in condition for allowance.

Part III.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.
☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

(Applicant/Applicant's Representative Signature – if appropriate)

Notice of Allowability	Application No.	Applicant(s)	
	10/347,388	SHMUELI ET AL.	
	Examiner	Art Unit	
	JUTAI KAO	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed 12/06/2010* .

2. ☒ The allowed claim(s) is/are *1,2,7-36,38 and 39*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *02/10/2011* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jason Rosenblum (Reg. No. 56,437) on 02/10/2011.

The application has been amended as follows:

Claim 37 (Cancelled).

Claim 40 (Cancelled).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ju-Tai Kao

/Ju-Tai Kao/
Acting Examiner of Art Unit 2473

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 5659

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/347,388	01/21/2003	370	2473	25068

APPLICANTS

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat Gan, ISRAEL;

**** CONTINUING DATA ***************************

This appln claims benefit of 60/398,077 07/25/2002

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
04/21/2003

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /JUTAI KAO/ Examiner's Signature	☐ Met after Allowance JK Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		ISRAEL	1	27	3

ADDRESS

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215
UNITED STATES

TITLE

Routing of data including multimedia between electronic devices

FILING FEE RECEIVED		
1071	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S67	259	((bi adj direction$4) or bidirection$3) near6 (streaming)	US-PGPUB; USPAT	OR	ON	2011/02/01 13:26
S69	106	S68 and S67	US-PGPUB; USPAT	OR	ON	2011/02/01 13:27
S68	4334651	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2011/02/01 13:27
S70	35	S69 and (radio or rf or mobile or wireless)	US-PGPUB; USPAT	OR	ON	2011/02/01 13:28
S73	37	S72 and (radio or rf or mobile or wireless)	US-PGPUB; USPAT	OR	ON	2011/02/01 14:41
S72	51	S71 and S68	US-PGPUB; USPAT	OR	ON	2011/02/01 14:41
S71	89	stream$4 near7 multiple near3 channel near7 (multiple or plurality) near3 (equipment or node or device)	US-PGPUB; USPAT	OR	ON	2011/02/01 14:41
S76	30	S75 and S68	US-PGPUB; USPAT	OR	ON	2011/02/01 14:57
S75	34	S74 same (plurality or multiple) near3 (device or station or nodes or equipment)	US-PGPUB; USPAT	OR	ON	2011/02/01 14:57
S74	184	streaming near7 multiple near3 channel	US-PGPUB; USPAT	OR	ON	2011/02/01 14:57
S78	22	(ad near2 hoc) and (((two adj way) or bidirection$4 or (bi adj direction$4)) near8 streaming)	US-PGPUB; USPAT	OR	ON	2011/02/02 14:07
S77	3787	(ad near2 hoc) and streaming	US-PGPUB; USPAT	OR	ON	2011/02/02 14:07
S83	2	S82 and S79	US-PGPUB; USPAT	OR	ON	2011/02/02 14:08

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S82	24	(ad near2 hoc) and (direction $4 near8 streaming)	US-PGPUB; USPAT	OR	ON	2011/02/02 14:08
S81	974	S77 and S79	US-PGPUB; USPAT	OR	ON	2011/02/02 14:08
S80	0	S78 and S79	US-PGPUB; USPAT	OR	ON	2011/02/02 14:08
S79	4334651	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2011/02/02 14:08
S85	0	S84 and S79	US-PGPUB; USPAT	OR	ON	2011/02/02 14:12
S84	12	(mesh near3 network) and (((two adj way) or bidirection $4 or (bi adj direction$4)) near8 streaming)	US-PGPUB; USPAT	OR	ON	2011/02/02 14:12
S88	39	S86 and S87	US-PGPUB; USPAT	OR	ON	2011/02/07 09:45
S87	4334869	(@rlad<"20020725" or @ad<"20020725")	US-PGPUB; USPAT	OR	ON	2011/02/07 09:45
S86	153	(ad near2 hoc) and (((two adj way) or bidirection$4 or (bi adj direction$4)) same streaming)	US-PGPUB; USPAT	OR	ON	2011/02/07 09:45
S90	19	S89 and S87	US-PGPUB; USPAT	OR	ON	2011/02/07 09:52
S89	100	(ad adj hoc) same (video near2 conferenc$4)	US-PGPUB; USPAT	OR	ON	2011/02/07 09:52

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	2	((ad adj hoc) same (bidirectional)).clm.	USPAT; UPAD	OR	ON	2011/02/11 11:58
L2	1	((ad adj hoc) same (video near2 conferenc$4)).clm.	USPAT; UPAD	OR	ON	2011/02/11 11:58
L1	2218	370/271,312,390,396.ccls.	USPAT; UPAD	OR	ON	2011/02/11 11:58
L7	11	6 and 1	USPAT; UPAD	OR	ON	2011/02/11 11:59

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Apple EX1002 Page 478

L6	1376	rerout$4.clm.	USPAT; UPAD	OR	ON	2011/02/11 11:59
L5	1	1 and 4	USPAT; UPAD	OR	ON	2011/02/11 11:59
L4	77	(bidirectional near8 stream$4).clm.	USPAT; UPAD	OR	ON	2011/02/11 11:59

2/ 11/ 2011 12:05:09 PM
C:\ Documents and Settings\ Jkao\ My Documents\ EAST\ Workspaces\ 10347388 new.wsp

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Apple EX1002 Page 479

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009	07/02/2010	02/11/2011				
1	1	✓	✓	✓	✓	=				
2	2	✓	✓	✓	✓	=				
	3	✓	✓	✓	✓	-				
	4	✓	✓	✓	✓	-				
	5	✓	✓	✓	✓	-				
	6	✓	✓	✓	✓	-				
3	7	✓	✓	✓	✓	=				
4	8	✓	✓	✓	✓	=				
5	9	✓	✓	✓	✓	=				
6	10	✓	✓	✓	✓	=				
7	11	✓	✓	✓	✓	=				
8	12	✓	✓	✓	✓	=				
9	13	✓	✓	✓	✓	=				
10	14	✓	✓	✓	✓	=				
11	15	✓	✓	✓	✓	=				
12	16	✓	✓	✓	✓	=				
13	17	✓	✓	✓	✓	=				
14	18	✓	✓	✓	✓	=				
15	19	✓	✓	✓	✓	=				
16	20	✓	✓	✓	✓	=				
17	21	✓	✓	✓	✓	=				
18	22	✓	✓	✓	✓	=				
19	23	✓	✓	✓	✓	=				
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21	25	✓	✓	✓	✓	=				
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23	27	✓	✓	✓	✓	=				
24	28	✓	✓	✓	✓	=				
25	29	✓	✓	✓	✓	=				
26	30	✓	✓	✓	✓	=				
27	31	✓	✓	✓	✓	=				
28	32	✓	✓	✓	✓	=				
29	33	✓	✓	✓	✓	=				
30	34	✓	✓	✓	✓	=				
31	35	✓	✓	✓	✓	=				
32	36	✓	✓	✓	✓	=				

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/24/2008	06/05/2009	12/16/2009	07/02/2010	02/11/2011				
	37		✓	✓	✓	-				
33	38		✓	✓	✓	=				
34	39				✓	=				
	40					-				

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10347388	SHMUELI ET AL.
	Examiner	Art Unit
	JUTAI KAO	2473

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search, see attached search history	10/23/2008	JK
EAST text search, see attached search history	07/02/2010	JK
EAST text search, see attached search history	02/11/2011	JK

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
370	271,312,390,396	02/11/2011	JK

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Apple EX1002 Page 482

Issue Classification

Application/Control No.	Applicant(s)/Patent Under Reexamination
10347388	SHMUELI ET AL.
Examiner	**Art Unit**
JUTAI KAO	2473

ORIGINAL		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
370	396	H 0 4 L 12 / 16 (2006.01.01)	
CROSS REFERENCE(S)		H 0 4 H 20 / 71 (2008.01.01)	
		H 0 4 L 12 / 28 (2006.01.01)	

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
370	271	312	390		

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	21	33	38										
2	2	18	22	34	39										
3	7	19	23												
4	8	20	24												
5	9	21	25												
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12	16	28	32												
13	17	29	33												
14	18	30	34												
15	19	31	35												
16	20	32	36												

/JUTAI KAO/ Examiner.Art Unit 2473 (Assistant Examiner)	02/11/2011 (Date)	**Total Claims Allowed:** 34	
/KWANG B YAO/ Supervisory Patent Examiner.Art Unit 2473 (Primary Examiner)	02/11/2011 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

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Apple EX1002 Page 483

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UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

67801 7590 04/13/2011

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

EXAMINER	
KAO, JUTAI	

ART UNIT	PAPER NUMBER
2473	

MAIL DATE	DELIVERY MODE
04/13/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Supplemental Notice of Allowability	Application No. 10/347,388	Applicant(s) SHMUELI ET AL.	
	Examiner JUTAI KAO	Art Unit 2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *IDS filed 02/15/2011*.

2. ☒ The allowed claim(s) is/are *1,2,7-36,38 and 39*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2473

PTO/SB/08a (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(*use as many sheets as necessary*)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Art Unit	2473
Examiner Name	KAO Jutai
Attorney Docket Number	25068

Sheet 1 of 2

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Document Number Number-Kind Code[2] (if known)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. [1]	Foreign Patent Documents Country Code[3]-Number[4]-Kind Code[5] (*if known*)	Publication Date DD-MMM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [6]

Examiner Signature	/Jutai Kao/	Date Considered	04/07/2011

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. this collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

PTO/SB/08a (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S.Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(*use as many sheets as necessary*)

Complete if Known	
Application Number	10/347,388
Filing Date	January 21, 2003
First Named Inventor	SHMUELI Oded et al
Group Art Unit	2473
Examiner Name	KAO Jutai
Attorney Docket Number	25068

Sheet	2	Of	2

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
/J.K./	1	Official Action Dated 17 April 2008 From the US Patent and Trademark Office Re.: Application No. 11/146,130.	

Examiner Signature	/Jutai Kao/	Date Considered	04/07/2011

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional).

[2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).

[4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

[5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

[6] Applicant is to place a check mark here if English language translation is attached.

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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

67801 7590 02/18/2011
MARTIN D. MOYNIHAN d/b/a PRTSI, INC.
P.O. BOX 16446
ARLINGTON, VA 22215

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	01/21/2003	Oded Shmueli	25068	5659

TITLE OF INVENTION: ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	05/18/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
KAO, JUTAI	2473	370-328000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number **50-1407** (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature **/Jason H. Rosenblum/** Date **May 17, 2011**

Typed or printed name **Jason H. Rosenblum** Registration No. **56,437**

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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IPR2024-01050
Apple EX1002 Page 488

Electronic Patent Application Fee Transmittal

Application Number:	10347388
Filing Date:	21-Jan-2003
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Filer:	Jason Harris Rosenblum
Attorney Docket Number:	25068

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1055**

Electronic Acknowledgement Receipt

EFS ID:	10104219
Application Number:	10347388
International Application Number:	
Confirmation Number:	5659
Title of Invention:	ROUTING OF DATA INCLUDING MULTIMEDIA BETWEEN ELECTRONIC DEVICES
First Named Inventor/Applicant Name:	Oded Shmueli
Customer Number:	67801
Filer:	Jason Harris Rosenblum
Filer Authorized By:	
Attorney Docket Number:	25068
Receipt Date:	17-MAY-2011
Filing Date:	21-JAN-2003
Time Stamp:	10:12:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1055
RAM confirmation Number	8578
Deposit Account	501407
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	25068_Issue_Fee_Transmittal.pdf	93569 ea6b6cf55a463a398f0a9534ca0dba7cd1325271	no	1
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	31764 9a70910971c4e2d978b843fa68cba963b5769832	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	125333		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/347,388	06/28/2011	7969990	25068	5659

67801 7590 06/08/2011

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ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 1206 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Oded Shmueli, Nofit, ISRAEL;
Benny Yehezkel, Ramat Gan, ISRAEL;

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
10/347,388	01/21/2003	Oded Shmueli	25068	177542

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 11/03/2022 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

X Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Martin D. Moynihan/
Name:	Martin D. Moynihan
Registration Number:	40338