

Inter Partes Review U.S. Patent Nos. 9,141,960 and 10,251,021

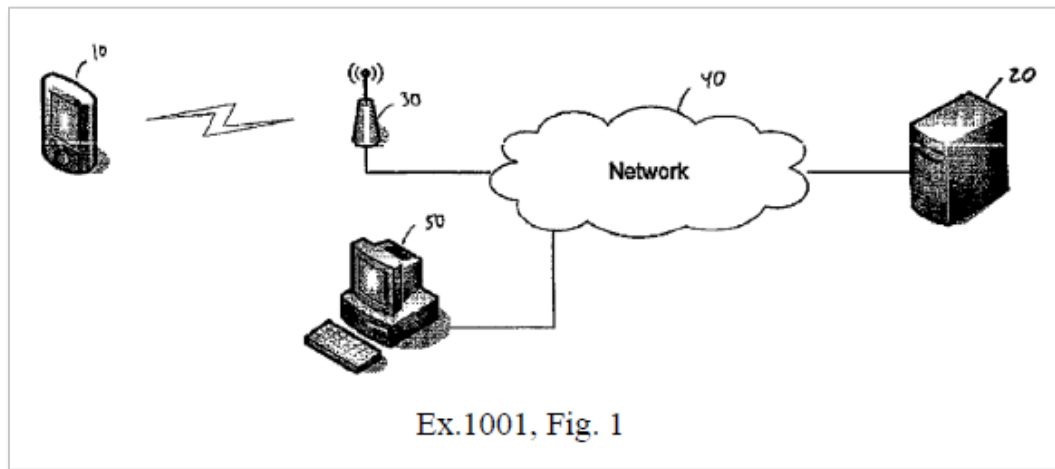
Google LLC v. Wildseed Mobile LLC, Cases IPR2023-00244, IPR2023-00246

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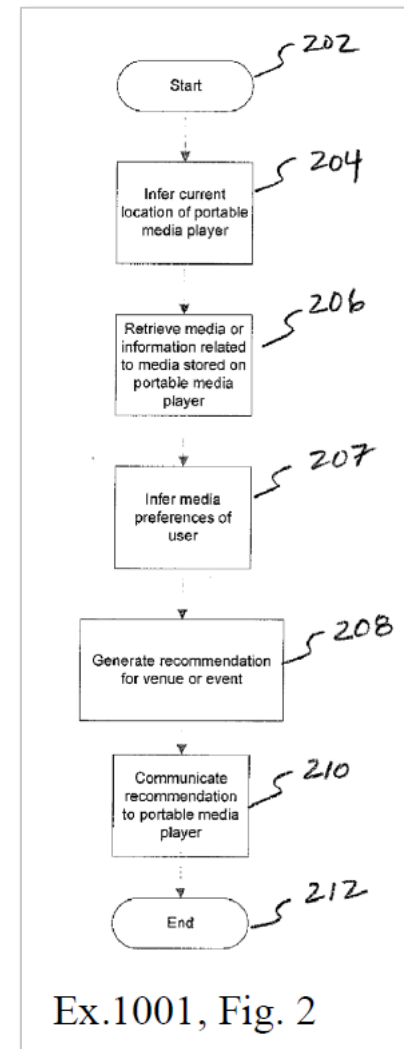


DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The '960 and '021 Patents



Ex. 1001, Fig. 1; '960 Pet., 10; see also '021 Pet., 30.



Ex. 1001, Fig. 2; '960 Pet., 10; see also '021 Pet., 11.

'960 and '021 Patents:

Sasaki and Ellis teach inferring one or more
entertainment preferences of a user.

Sasaki and Ellis render obvious “inferring”
“one or more entertainment preferences of a user”.

'960 Patent, Claim 1

1. A method comprising:
retrieving, by a server, a plurality of media stored on or accessed using a portable media player device, or information about said plurality of media;
inferring, by the server, based at least in part on the retrieved plurality of media or the retrieved information about said plurality of media, one or more entertainment preferences of a user of the portable media player device;
accessing, by the server, one or more sources of information about venues or events proximal to a current location of the user;
identifying, by the server, at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;
generating, by the server, a recommendation indicating the identified venue or event as a venue or event of interest to the user; and
communicating, by the server, the recommendation to the user.

'960 Ex.1001, Claim 1.

'021 Patent, Claim 1

1. One or more non-transitory computer-readable media (NTCRM) comprising instructions written thereon, wherein execution of the instructions by one or more processors of a computer server is to cause the computer server to:
control receipt of media or information about the media, the media being stored on a portable media player device or accessed using the portable media player device;
infer one or more entertainment preferences of a user of the portable media player device based at least in part on the retrieved media, the retrieved information about the media, and a plurality of media content types of the media stored on or accessed by the portable media player device, wherein the plurality of media content types comprises textual media, image media, audio media, and video media;
access one or more sources of information about venues or events proximal to a current location of the user;
identify at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;
generate a recommendation indicating the identified venue or event as a venue or event of interest to the user; and
control communication of the recommendation to the user.

'021 Ex.1001, Claim 1. 4

Ellis's techniques are used in connection with a portable device that stores and downloads content

Ellis

[0156] FIG. 6B shows an enhanced radio embodiment 650 configured to be used portably. It includes a main unit 652, which may include controls 654 and mounting means 656. Controls 654 may be substantially similar to controls shown in FIG. 6A. Mount may be configured, for example, to attach to a user's clothing. Embodiment 650 may also include speakers (e.g., headphones) 658, antenna (not shown), and connection 659 (e.g., wireless or wired) for sending audio signals from main device 652 to speakers 658. It may also include connector 662 for connecting to communications device 155 (FIG. 1). Connector 662 may be, for example, a telephone connector or an Ethernet connector, or a PC Card slot for a memory card. Embodiment 650 may alternatively contain communications device 155, which may be, for example, an infrared transceiver or a radio frequency transceiver.

'960/'021 Ex.1005, [0156].

radio sources may be available. Multiple receivers 4206 may simultaneously receive the multiple radio stations 4204, and store them digitally into buffers 4208 in computer digital storage device 4209, storing the most recent several minutes of each. One of the buffers may be used to provide an audio output 4210 for the listener 4202. The listener may choose a subset of the available radio stations 4204 and assign them to presets 4216, and the system will continuously monitor those favorite stations, storing recent content from each into buffers 4206. The system may continuously monitor the

'960/'021 Ex.1005, [0136].

[0137] The listener may record songs 4218 and other content from the radio and replay them later, or download songs from other sources. The listener may rate songs 4248.

'960/'021 Ex.1005, [0137].

Ellis teaches a technique for inferring preferences by monitoring content consumed on the portable device and reporting usage data to a central facility.

Ellis

using communications device **155**. The system may also determine user preferences automatically by monitoring what content the user listens to.

'960/'021 Ex.1005, [0185].

a specific group of content. The system may also monitor the content listened to by the user, and automatically determine the groups liked and disliked by the user. In step **1830**, the

'960/'021 Ex.1005, [0212].

used by the user to specify likes and dislikes. In step **2220**, the system may determine user information automatically by monitoring the content the user listens to. For example, the

'960/'021 Ex.1005, [0221].

[0263] **FIG. 37** shows flowchart **3700** of an illustrative process to collect and report enhanced radio usage data. The steps of this process may be performed in any suitable order, and any steps may be omitted if desired. In step **3710**, the system may collect information on radio stations that the user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'960/'021 Ex.1005, [0263].

audio content to store in memory **120** and play back later. In step **3055**, the system may report usage data to a central facility.

'960/'021 Ex.1005, [0236].

Sasaki teaches a server that receives preference information and provides content recommendations to a portable device.

Sasaki

[0126] As described above with reference to FIG. 5, in the member database formed in the HDD 4 of the server at the service spot, identifying signals such as terminal IDs and personal IDs of members, and preference information of the members are stored beforehand, whereby, only by transmitting an identifying signal from each terminal device to the server, pieces of content recommendation information can be provided in response to the preference of the user of the terminal device.

'960/'021 Ex.1004, [0126].

nication channel may have various forms. In addition, it is also possible to perform updating information in a server by transmitting user's latest preference information from a terminal device to the server, and providing content recommendation information corresponding to the latest preference information.

'960/'021 Ex.1004, [0126].

The combination of Sasaki and Ellis teaches a server that infers a user's preferences from the media consumed on their portable device.

- Ellis teaches a technique to automatically determine a user's preferences by monitoring the media content consumed by the user and reporting usage data to a central facility.
- Sasaki teaches a server that receives user preference information from a mobile terminal.
- Sasaki's server uses the user preference information to provide content recommendation.

'960 Pet. 29-33; '021 Pet., 31-36; '960 Ex.1003, ¶¶ 75-90; '021 Ex.1003, ¶¶ 74-95; '960 Reply, 1-6; '021 Reply, 1-4;

'960 Patent:

Sasaki and Ellis teach inferring user preferences
based on “a plurality of media”.

Sasaki and Ellis render obvious inferring preferences “based on” a “plurality of media”.

'960 Patent, Claim 1

1. A method comprising:
retrieving, by a server, a plurality of media stored on or accessed using a portable media player device, or information about said plurality of media;
inferring, by the server, based at least in part on the retrieved plurality of media or the retrieved information about said plurality of media, one or more entertainment preferences of a user of the portable media player device;
accessing, by the server, one or more sources of information about venues or events proximal to a current location of the user;
identifying, by the server, at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;
generating, by the server, a recommendation indicating the identified venue or event as a venue or event of interest to the user; and
communicating, by the server, the recommendation to the user.

'960 Ex.1001, Claim 1.

'960: The combination of Sasaki and Ellis.

Petition

As discussed in [1.1], Sasaki teaches a *server*. Further, Sasaki's server stores "preference information" provided by the members (e.g., *users*). Ex.1004, [0126]. Ellis discloses several techniques for inferring the entertainment preferences of a user of a portable media player device based on media usage information. See Ex.1005, [0263].

'960 Pet., 32.

Thus, Sasaki's server that stores user preferences about multiple types of content accessed by a user of a portable media player device in view of Ellis's technique of automatically determining a user's preferences about types of content, songs, commercials, shows, and other content, where the automatic determination is based on monitoring a portable media player device user's usage information renders obvious this limitation. Ex.1003, ¶¶84-90.

'960 Pet., 33.

Ellis and Sasaki each teach using a plurality of media in their content recommendation systems.

Ellis

user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'960 Ex.1005, [0263].

[0214] In step 1910, a group may be based on type of content, such as grouping all commercials, all songs, etc. In step 1915, a group may be based on a category of content, such as bluegrass music, alternative rock, or other music genre. In step 1920, a group may be based on a specific performing artist, and may contain all songs performed by that artist. In step 1925, a group may be based a particular radio station, and may contain all content broadcast by that station. In step 1930, a group may be based on a specific radio show, and may contain all content broadcast in that show. In step 1935, a group may be based on a particular parental advisory level.

'960 Ex.1005, [0214].

artists the user does not like. It may also include one or more fields 2570 for storing information about how the user's preferences change over time, for example if the user likes listening to different types of content on different days of the week or at different times of the day. All fields shown are

'960 Ex.1005, [0230].

Sasaki

ever, the main information is not limited thereto. The content recommendation information represents various types of information concerning a piece of content the user likes (desires to recommend) among pieces of content owned by the user of the terminal device, for example, CD music, still pictures such as electrophotographs and CG (computer graphics) images, DVD video, and text data such as novels.

'960 Ex.1004, [0074].

[0045] The terminal device according to this embodiment can receive audio data such as music, and image data such as still images and video, for example, from an external device such as a personal computer connected through the communication interface 6 and the communication terminal 7, and can record and store the audio data and the image data in the HDD 4.

'960 Ex.1004, [0045].

[0021] The terminal device of the above embodiment is of a so-called "portable type", as described above. The terminal device has reduced size and weight, and can be carried, with it put in a location such as a pocket of user's clothes or a bag. Accordingly, also in a place such as a location where the user is out, various types of content, such as music and images, can be played back for use.

'960 Ex.1004, [0021].

Patent Owner incorrectly conflates “plurality of media” with “plurality of types of media”.

Patent Owner’s Claim Construction: “more than one media”

preferences of a user of the portable media player device.” EX1001, Claim 1. By its plain language, this limitation requires that the inference of the user’s entertainment preferences be based on *more than one media* or information about *more than one media*. EX2007, ¶¶81-83.

’960 POR, 8.

Patent Owner’s Analysis: “plurality of media content types”

b) Ellis does not disclose or suggest inferring a user’s preferences based on the *claimed plurality of media content types*.

Second, Ellis discloses a system that *only determines a user’s preferences for radio (i.e., audio) content*. EX2007, ¶¶133-136. The examples cited in the Petition each refer to determining preferences based on what a user has *listened* to:

’960 POR, 26.

Id., ¶221; Pet., 34-35. Thus, Ellis teaches determining user preferences based only on *a single media, namely audio media*. Ellis does not disclose or suggest inferring user preferences based on *a plurality of media content types*.

’960 POR, 26.

’960 Reply, 10-13; ’960 POR, 8, 26-29; ’960 Sur-reply, 3-8.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The '960 Patent distinguishes between “media” and “media types”.

'960 Patent

may be implemented. In the embodiment shown, a portable media player device 10 having stored therein a number of media files (“media”) is associated with a user. Additionally,

'960 Ex.1001, 3:53-55.

Portable media player devices are increasing in popularity. A portable media player device is a transportable device that plays one or more media file types, including text, audio, video, graphics, interactive, and other media file types. For

'960 Ex.1001, 1:24-27.

The only embodiment in the '960 Patent is inferring preferences based on a plurality of media of a single media type.

'960 Patent

forth. For example, the server may determine that the user has a preference for a jazz music genre if the portable media player device stores or has been used to access a substantial amount of music by famous jazz artists such as Ella Fitzgerald or Louis Armstrong. What constitutes a substantial amount may be evolved dynamically overtime based on feedback on the relevance, success or usefulness of the recommendation and/or information provided to the user or a group of users. The server may also determine that the user has a preference for film genres related to science fiction if a significant number of science fiction movies such as Close Encounters of the Third Kind or Star Wars are stored as video media in or accessed using the portable media player device.

'960 Patent, 5:34-46.

of the user and the portable media player device. The server may also transmit a recommendation (or information) to a user, e.g. his portable music player device having gospel music stored on or accessed using the portable music player device for a church known for gospel music within a convenient walking or driving distance to the current location of the user and the portable media player device. The server may

'960 Patent, 6:10-16.

The '960 Patent does not provide any examples in which the inferring is based on a plurality of media content types.

'960 Reply, 11-13.

Ellis and Sasaki each also teach using a plurality of different media types in their content recommendation systems.

Ellis

user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'960 Ex.1005, [0263].

[0214] In step 1910, a group may be based on type of content, such as grouping all commercials, all songs, etc. In

'960 Ex.1005, [0214].

[0230] FIG. 25 shows illustrative data structure 2500 for storing user preferences. It may include field 2510 for storing information about music formats the user likes. It may include field 2520 for storing information about music formats the user does not like. It may include field 2530 for storing information about talk formats the user likes. It may include field 2540 for storing information about talk formats the user does not like. It may include field 2550 for storing information about performing artists the user likes. It may include field 2560 for storing information about performing artists the user does not like. It may also include one or more fields 2570 for storing information about how the user's preferences change over time, for example if the user likes listening to different types of content on different days of the week or at different times of the day. All fields shown are

Sasaki

ever, the main information is not limited thereto. The content recommendation information represents various types of information concerning a piece of content the user likes (desires to recommend) among pieces of content owned by the user of the terminal device, for example, CD music, still pictures such as electrophotographs and CG (computer graphics) images, DVD video, and text data such as novels.

'960 Ex.1004, [0074].

[0045] The terminal device according to this embodiment can receive audio data such as music, and image data such as still images and video, for example, from an external device such as a personal computer connected through the communication interface 6 and the communication terminal 7, and can record and store the audio data and the image data in the HDD 4.

'960 Ex.1004, [0045].

[0021] The terminal device of the above embodiment is of a so-called "portable type", as described above. The terminal device has reduced size and weight, and can be carried, with it put in a location such as a pocket of user's clothes or a bag. Accordingly, also in a place such as a location where the user is out, various types of content, such as music and images, can be played back for use.

'960 Ex.1004, [0021].

'021 Patent:

Sasaki and Ellis teach inferring user preferences based on “a plurality of media content types” including “textual media, image media, audio media, and video media”.

'021: Sasaki and Ellis render obvious inferring preferences based on “textual media, image media, audio media, and video media”.

'021 Patent, Claim 1

1. One or more non-transitory computer-readable media (NTRM) comprising instructions written thereon, wherein execution of the instructions by one or more processors of a computer server is to cause the computer server to:

control receipt of media or information about the media, the media being stored on a portable media player device or accessed using the portable media player device;

infer one or more entertainment preferences of a user of the portable media player device based at least in part on the retrieved media, the retrieved information about the media, and a plurality of media content types of the media stored on or accessed by the portable media player device, wherein the plurality of media content types comprises textual media, image media, audio media, and video media;

access one or more sources of information about venues or events proximal to a current location of the user;

identify at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;

generate a recommendation indicating the identified venue or event as a venue or event of interest to the user; and

control communication of the recommendation to the user.

'021 Ex.1001, Claim 1.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'021: The combination of Sasaki and Ellis.

Petition

As discussed in [1.1.1], Sasaki and Ellis render obvious a server that receives user preference information about different media content types, such as music, still pictures, video, and text that was gathered by monitoring a user's listening habits on a portable media player device.

Ellis discloses several techniques for inferring the entertainment preferences of a user of a portable media player device based on media usage information (such as "information on particular songs, commercials, shows, and other content" that the user heard, and "content the user may have skipped over"). *See* Ex.1005, [0263].

'021 Pet., 34.

Thus, Sasaki's server that receives user preference information about different media content types, such as music, still pictures, video, and text in view of Ellis teachings of automatically determining a user's preferences about songs, commercials, shows, genres, groupings and other content, by monitoring and tracking a user's usage information retrieved from a portable media player device, where the usage information is about media on or accessed by a portable media player device, render obvious this limitation. Ex.1003, ¶¶87-95.

'021 Pet., 36.

'021 Pet., 34-36; '021
Ex.1003, ¶¶ 87-95.

'021: Ellis and Sasaki each teach using a plurality of different media types in their content recommendation systems.

Ellis

user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'021 Ex.1005, [0263].

[0214] In step 1910, a group may be based on type of content, such as grouping all commercials, all songs, etc. In

'021 Ex.1005, [0214].

[0230] FIG. 25 shows illustrative data structure 2500 for storing user preferences. It may include field 2510 for storing information about music formats the user likes. It may include field 2520 for storing information about music formats the user does not like. It may include field 2530 for storing information about talk formats the user likes. It may include field 2540 for storing information about talk formats the user does not like. It may include field 2550 for storing information about performing artists the user likes. It may include field 2560 for storing information about performing artists the user does not like. It may also include one or more fields 2570 for storing information about how the user's preferences change over time, for example if the user likes listening to different types of content on different days of the week or at different times of the day. All fields shown are

HB

'021 Ex.1005, [0230]. DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Sasaki

ever, the main information is not limited thereto. The content recommendation information represents various types of information concerning a piece of content the user likes (desires to recommend) among pieces of content owned by the user of the terminal device, for example, CD music, still pictures such as electrophotographs and CG (computer graphics) images, DVD video, and text data such as novels.

'021 Ex.1004, [0074].

[0045] The terminal device according to this embodiment can receive audio data such as music, and image data such as still images and video, for example, from an external device such as a personal computer connected through the communication interface 6 and the communication terminal 7, and can record and store the audio data and the image data in the HDD 4.

'960 Ex.1004, [0045].

[0021] The terminal device of the above embodiment is of a so-called “portable type”, as described above. The terminal device has reduced size and weight, and can be carried, with it put in a location such as a pocket of user's clothes or a bag. Accordingly, also in a place such as a location where the user is out, various types of content, such as music and images, can be played back for use.

'960 Ex.1004, [0021].

'021: Patent Owner incorrectly asserts that the inferring must be based on all the content types listed.

Patent Owner Response

EX1001, Claim 1. More specifically, the clause, “wherein *the plurality of media content types comprises* textual media, image media, audio media, and video media,” requires that the inference of the user’s entertainment preferences be based on all four of the recited types of media. EX2007, ¶¶95-99; *supra* Section II.B.1.

'021 POR, 16.

As explained in Patent Owner’s Response, a correct construction requires the “infer[ring]” to be based on *each of* “textual media, image media, audio media, and video media.” POR, 15-18. The plain language of the clause “wherein the plurality of media content types *comprises* textual media, image media, audio media, and video media,” requires that the inference of the user’s entertainment preferences be based on all four of the recited types of media. Under Federal

'021 Sur-reply, 4.

'021: Patent Owner's expert's understanding is inferring a preference based on a single media type.

Dr. Stillerman Deposition

THE WITNESS: So, yeah, if we take the -- if we look at the claim in its entirety, as long as the player can handle all four media content types, then inferring a user's entertainment preferences based on one of those types, the audio type is fine.

'021 Ex.1023, 46.

'021: The only embodiment in the '021 Patent is inferring a preference based on a single media type.

'021 Patent

subject matter, and so forth. For example, the server may determine that the user has a preference for a jazz music genre if the portable media player device stores or has been used to access a substantial amount of music by famous jazz artists such as Ella Fitzgerald or Louis Armstrong. What constitutes a substantial amount may be evolved dynamically overtime based on feedback on the relevance, success or usefulness of the recommendation and/or information provided to the user or a group of users. The server may also determine that the user has a preference for film genres related to science fiction if a significant number of science fiction movies such as Close Encounters of the Third Kind or Star Wars are stored as video media in or accessed using the portable media player device.

'021 Patent, 5:44-57.

The '021 Patent does not provide any examples in which a content recommendation is based on all the types of content listed.

'960 and '021 Patents:

Sasaki and Ellis teach the “current location” limitations.

'960: Sasaki and Ellis render obvious the
“current location” limitations.

'960 Patent, Claim 1

1. A method comprising:
retrieving, by a server, a plurality of media stored on or accessed using a portable media player device, or information about said plurality of media;
inferring, by the server, based at least in part on the retrieved plurality of media or the retrieved information about said plurality of media, one or more entertainment preferences of a user of the portable media player device;
accessing, by the server, one or more sources of information about venues or events proximal to a current location of the user;
identifying, by the server, at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;
generating, by the server, a recommendation indicating the identified venue or event as a venue or event of interest to the user; and
communicating, by the server, the recommendation to the user.

'960 Ex.1001, Claim 1; see *also* Claim 21.

'960 Patent, Claim 11

11. A method comprising:
providing to a server, by a portable media player device, a current location of the portable media player device to facilitate the server in inferring a current location of a user of the portable media player device; and
receiving by the portable media player device, from the server, a recommendation indicating an event or venue of interest located proximal to the inferred current location of the user as being of interest to the user;
wherein the recommendation is generated by the server based at least in part on the inferred current location, data accessed by the server from one or more sources of information about venues or events proximal to the current location of the user, and one or more entertainment preferences of the user, the event or venue of interest being one of said venues or events; and
wherein the one or more entertainment preferences are inferred by the server based at least in part on an analysis, by the server, of a plurality of media stored on or accessed using the portable media player device or information about said plurality of media.

'960 Ex.1001, Claim 11; see *also* Claims 6, 16.

'021: Sasaki and Ellis render obvious the “current location” limitations.

'021 Patent, Claim 1

1. One or more non-transitory computer-readable media (NTRM) comprising instructions written thereon, wherein execution of the instructions by one or more processors of a computer server is to cause the computer server to:

control receipt of media or information about the media, the media being stored on a portable media player device or accessed using the portable media player device;

infer one or more entertainment preferences of a user of the portable media player device based at least in part on the retrieved media, the retrieved information about the media, and a plurality of media content types of the media stored on or accessed by the portable media player device, wherein the plurality of media content types comprises textual media, image media, audio media, and video media;

access one or more sources of information about venues or events proximal to a current location of the user;

identify at least one of said venues or events as being of interest to the user based at least in part on the one or more entertainment preferences inferred by the server and the current location of the user;

generate a recommendation indicating the identified venue or event as a venue or event of interest to the user; and

control communication of the recommendation to the user.

'021 Ex.1001, Claim 1.

'021 Patent, Claim 10

10. One or more non-transitory computer-readable media (NTRM) comprising instructions that, when executed by one or more processors of a portable media player device, cause the portable media player device to:

operate a media player application to access media from a local storage of the portable media player device or a remote storage;

establish a network connection with a server, the server to provide location and preference based venue or event recommendations;

control transmission, to the server, of location information associated with the portable media player device to facilitate the server in inferring a current location of a user of the portable media player device; and

control receipt, from the server, of a recommendation indicating an event or venue of interest that is proximate to the inferred current location of the user, and wherein:

the recommendation is based on one or more inferred preferences of the user and the location information, the inferred preferences are based at least in part on the accessed media, media content types of the accessed media from among a plurality of media content types, and information about the accessed media, wherein the plurality of media content types comprises textual media, image media, audio media, and video media, and

the event or venue of interest is selected from one or more sources of information about a plurality of venues or events proximate to the current location of the user.

'021 Ex.1001, Claim 10.

'021: Sasaki and Ellis render obvious the “current location” limitations.

'021 Patent, Claim 16

16. A computer server to provide location and preference based venue or event recommendations, the computer server comprising:

- a communication interface to receive media or information about the media from a remote storage device, wherein the media is stored by a portable media player device or the media is remotely accessed using the portable media player device; and

- one or more processors communicatively coupled with the communication interface, the one or more processors to:

- infer one or more preferences of a user of the portable media player device based at least in part on the received media or the information about the media, and media content types of the media accessed by the portable media player device from among a plurality of media content types, wherein the plurality of media content types comprises textual media, image media, audio media, and video media;

- infer a current location of the user of the portable media player device based on obtained location information associated with the portable media player device;

- access one or more sources of information about venues or events proximal to a current location of the portable media player device;

- identify at least one of the venues or events to be a venue or event of interest to the user based on the one or more inferred preferences and the current location of the portable media player device;

- generate a recommendation to indicate the venue or event of interest; and

- control the communication interface to send the recommendation to the portable media player device via one or more of a short message service (SMS) message, an email message, a pager message, a facsimile message, or a phone call.

'021 Ex.1001, Claim 16; see *a/so* Claim 4.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'960/'021: Ellis teaches using GPS to determine the user's location.

Ellis

[0225] In step 2340, the system may use global positioning system monitor 160 to determine the user's location. The location may also be determined by other means, such as by allowing a user to enter it, or by monitoring the radio stations that may be received and comparing them against the geographical region field in the radio station database.

'960/'021 Ex.1005, [0225].

[0233] FIG. 28A shows illustrative process 2800 for recommending local events to a user, and is illustratively discussed in conjunction with FIG. 1. The steps of this process may be performed in any suitable order, and any steps may be omitted if desired. In step 2805, the system may acquire user information, such as user preferences. Flowchart 2110 of FIG. 22, discussed above, shows an illustrative process for acquiring user preferences. In step 2810, the system may acquire geographic position information, for example using global positioning system monitor 160, or by monitoring which radio stations are available and comparing them with a database of radio stations and geographical regions served by them. In step 2815, the system may acquire information about local events. Events may include concerts, celebrity appearances, signings, radio station events, contests, etc. Event information may be acquired using communications device 155. In step 2820, the system may select one or more recommended events. Events may be selected by comparing information about each event with user information, and selecting events that most closely match user preferences. In step 2825, the system may present one or more recommended events to the user, for example on display device 150.

'960/'021 Ex.1005, [0233]; see also [0234].

'960/'021: Ellis teaches using the current location of the user to recommend local events.

Ellis

[0233] FIG. 28A shows illustrative process 2800 for recommending local events to a user, and is illustratively discussed in conjunction with FIG. 1. The steps of this process may be performed in any suitable order, and any steps may be omitted if desired. In step 2805, the system may acquire user information, such as user preferences. Flowchart 2110 of FIG. 22, discussed above, shows an illustrative process for acquiring user preferences. In step 2810, the system may acquire geographic position information, for example using global positioning system monitor 160, or by monitoring which radio stations are available and comparing them with a database of radio stations and geographical regions served by them. In step 2815, the system may acquire information about local events. Events may include concerts, celebrity appearances, signings, radio station events, contests, etc. Event information may be acquired using communications device 155. In step 2820, the system may select one or more recommended events. Events may be selected by comparing information about each event with user information, and selecting events that most closely match user preferences. In step 2825, the system may present one or more recommended events to the user, for example on display device 150.

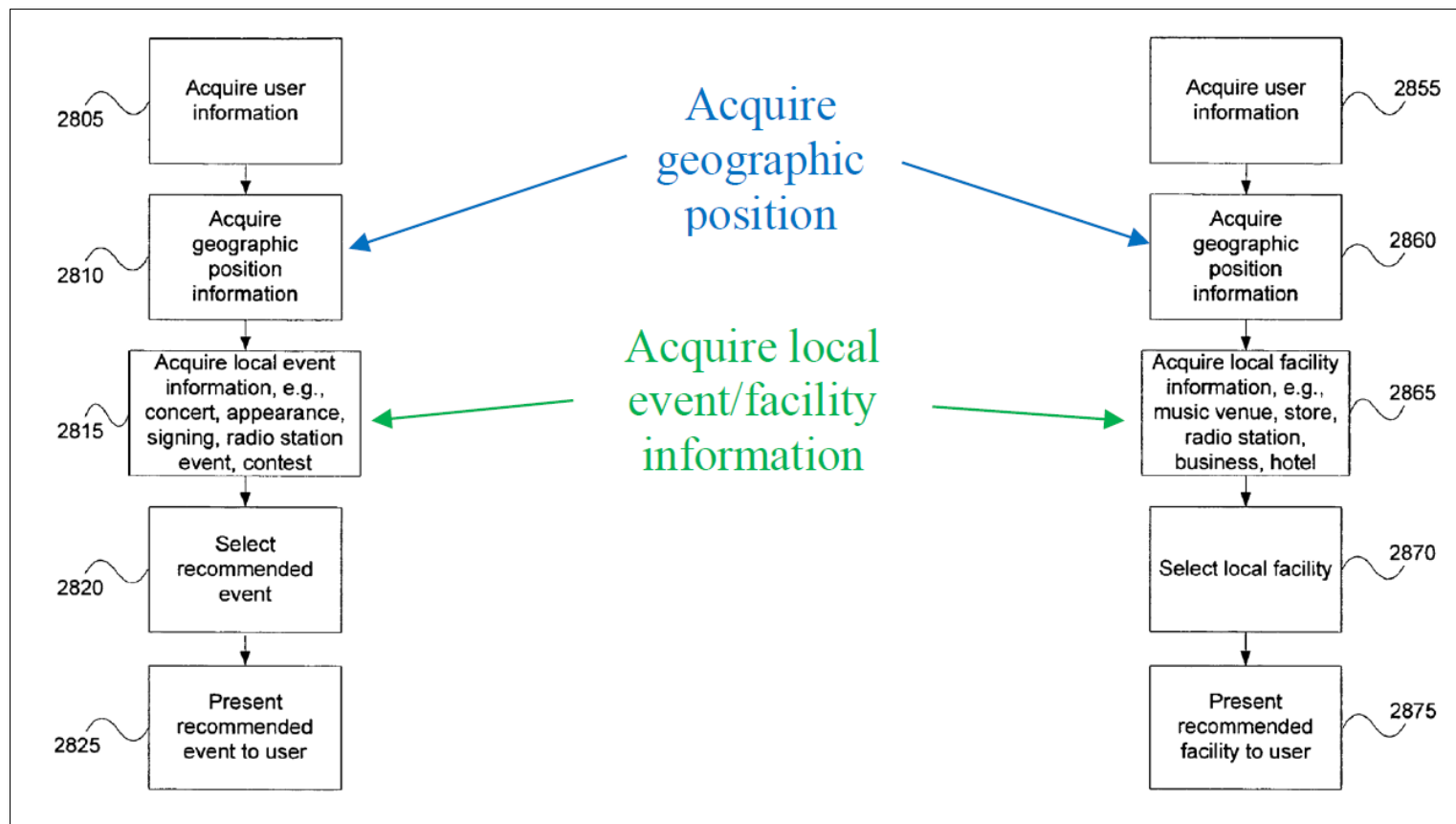
present a web page to the user. In step 3025, the system may download information about local events and local facilities.

'960/'021 Ex.1005, [0236].

'960/'021 Ex.1005, [0233]; see also [0234].

'960/'021: Ellis teaches using the current location of the user to recommend local events.

Ellis



'960 Pet., 35; see also '021 Pet., 37.

Sasaki teaches that the server can receive location information from the built-in GPS of the terminal device.

Sasaki

[0069] In this case, as the date and time of transmission, the present time that is acquired from a clock circuit of a terminal device that transmits the content recommendation information may be used. Regarding the place of transmission, for example, if the terminal has a built-in GPS (global positioning system), the GPS information may be used to specify the place of transmission, and the specifying information may be used. Alternatively, information representing the latitude and longitude (detected by the GPS) of the place of transmission which indicate the present position can directly be transmitted. In addition, the owner name of the terminal may be used as the recommender.

'960/'021 Ex.1004, [0069].

[0080] When terminal devices A and B have GPS receiving functions as described above, by recording positional information at a transmitting or receiving time in a memory of either terminal device, convenience is obtained when referring to a receiving list. However, since direct use of numerical information such as latitude and longitude is inconvenient, in a terminal device or in a personal computer to which data is transferred, the numerical information may be recorded after being converted into map information (link to a map image) or a building name or the like as a landmark.

[0081] Regarding positional information such as a place of transmission, for example, by using radio waves from a plurality of base stations for cellular telephone and specifying an approximate range around a transmitting position, the approximate range can be used. In other words, regarding the positional information such as a place of transmission, various methods can be used.

'960/'021 Ex.1004, [0080]-[0081].

'960 Pet., 34, 41, 55, 76; '021 Pet., 36, 42, 51, 53-54; '960 Reply, 14-15; '021 Reply, 12, 15.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The combination of Sasaki and Ellis teaches that the server receives the current location of the portable device to recommend local events.

- Sasaki explains that the terminal device can determine the location (GPS information) of the user.
- Sasaki explains that the terminal device can send the location of the user to the server.
- Ellis teaches that the GPS location of the portable device can be used to recommend local venues or events.

'960/'021: Sasaki's server-terminal embodiment is the terminal-terminal embodiment with a server instead of a terminal.

Sasaki

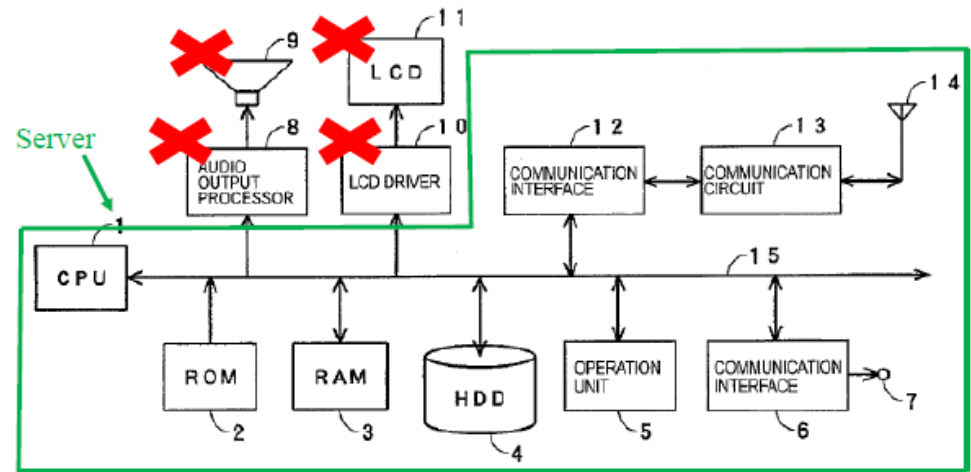
[0113] Specifically, the second embodiment is realized such that, in the above-described first embodiment, one terminal device (e.g., terminal device A) is replaced by a server at a service spot, and communication is performed between the server and terminal device B. Since, in this case, the server does not need to have audio and video playback systems, the server has a configuration without the audio output processor 8, speaker 9, LCD driver 10, and LCD 11 of the terminal device shown in FIG. 1. Terminal device B used in the second embodiment is similar in configuration to the terminal device whose configuration is shown in FIG. 1, and has similar functions.

'960/'021 Ex.1004, [0113].

embodiment of the present invention is applied, in a second embodiment of the present invention, content recommendation information is transmitted and received between a server at a service spot and a terminal device. In the second

'960/'021 Ex.1004, [0112].

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Ex.1004, Fig. 1 (annotated); Ex.1003, ¶75.

'960 Pet., 30; see also '021 Pet. 30.

'960 Pet., 21-22, 30; '021 Pet., 22-23, 30; '960 Ex. 1003, ¶41;
'021 Ex. 1003, ¶41; '960 Reply, 15-17; '021 Reply, 13, 15-16.

'960 and '021 Patents:
A POSITA would be motivated to combine
Sasaki and Ellis.

'960/'021: Patent Owner asserts that Ellis and Sasaki address distinct problems.

Patent Owner Response

Indeed, a POSITA would not have combined Sasaki and Ellis because the references address distinct problems. Ellis applies to radio content only, whereas Sasaki relates to content recommendations regarding various types of non-radio data. EX2007, ¶¶117-119.

'960 POR, 39; *see also* '021 POR, 50.

'960/'021: Sasaki and Ellis both describe portable devices.

Ellis

[0156] FIG. 6B shows an enhanced radio embodiment 650 configured to be used portably. It includes a main unit 652, which may include controls 654 and mounting means 656. Controls 654 may be substantially similar to controls shown in FIG. 6A. Mount may be configured, for example, to attach to a user's clothing. Embodiment 650 may also include speakers (e.g., headphones) 658, antenna (not shown), and connection 659 (e.g., wireless or wired) for sending audio signals from main device 652 to speakers 658. It may also include connector 662 for connecting to communications device 155 (FIG. 1). Connector 662 may be, for example, a telephone connector or an Ethernet connector, or a PC Card slot for a memory card. Embodiment 650 may alternatively contain communications device 155, which may be, for example, an infrared transceiver or a radio frequency transceiver.

'960/'021 Ex.1005, [0156].

Sasaki

[0021] The terminal device of the above embodiment is of a so-called "portable type", as described above. The terminal device has reduced size and weight, and can be carried, with it put in a location such as a pocket of user's clothes or a bag. Accordingly, also in a place such as a location where the user is out, various types of content, such as music and images, can be played back for use.

'960/'021 Ex.1004, [0021].

'960/'021: Sasaki and Ellis both describe portable devices for the consumption of content.

Ellis

user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'960/'021 Ex.1005, [0263].

Sasaki

ever, the main information is not limited thereto. The content recommendation information represents various types of information concerning a piece of content the user likes (desires to recommend) among pieces of content owned by the user of the terminal device, for example, CD music, still pictures such as electrophotographs and CG (computer graphics) images, DVD video, and text data such as novels.

'960/'021 Ex.1004, [0074].

'960/'021: Sasaki and Ellis both describe providing recommendations to portable devices.

Ellis

[0233] FIG. 28A shows illustrative process 2800 for recommending local events to a user, and is illustratively discussed in conjunction with FIG. 1. The steps of this process may be performed in any suitable order, and any steps may be omitted if desired. In step 2805, the system may acquire user information, such as user preferences. Flowchart 2110 of FIG. 22, discussed above, shows an illustrative process for acquiring user preferences. In step 2810, the system may acquire geographic position information, for example using global positioning system monitor 160, or by monitoring which radio stations are available and comparing them with a database of radio stations and geographical regions served by them. In step 2815, the system may acquire information about local events. Events may include concerts, celebrity appearances, signings, radio station events, contests, etc. Event information may be acquired using communications device 155. In step 2820, the system may select one or more recommended events. Events may be selected by comparing information about each event with user information, and selecting events that most closely match user preferences. In step 2825, the system may present one or more recommended events to the user, for example on display device 150.

'960/'021 Ex.1005, [0233]; *see also* [0234].

Sasaki

[0115] At the service spot, the installed server provides content recommendation information to a user's terminal device and the terminal device receives and stores the content recommendation information in the HDD 4 of the terminal device. The content recommendation information stored in the HDD 4 of the terminal device is later played back in response to an instruction of the user, whereby the user of the terminal device can obtain and use recommended content information for determining whether or not to purchase the content. Accordingly, by using content recommendation information provided from the server at the service spot to each terminal device, guidance can be performed so that content purchase is facilitated.

'960/'021 Ex.1004, [0115].

'960/'021: Ellis provides features that enhance content recommendation systems.

Ellis

a specific group of content. The system may also monitor the content listened to by the user, and automatically determine the groups liked and disliked by the user. In step 1830, the

'960/'021 Ex.1005, [0212].

artists the user does not like. It may also include one or more fields 2570 for storing information about how the user's preferences change over time, for example if the user likes listening to different types of content on different days of the week or at different times of the day. All fields shown are

'960/'021 Ex.1005, [0230].

illustrative process for acquiring user preferences. In step 2810, the system may acquire geographic position information, for example using global positioning system monitor 160, or by monitoring which radio stations are available and comparing them with a database of radio stations and geographical regions served by them. In step 2815, the system may acquire information about local events. Events may include concerts, celebrity appearances, signings, radio station events, contests, etc. Event information may be acquired using communications device 155. In step 2820, the system may select one or more recommended events. Events may be selected by comparing information about each event with user information, and selecting events that most closely match user preferences. In step 2825, the

'960/'021 Ex.1005, [0233].

'960/'021: A POSITA would have been motivated to combine Sasaki and Ellis.

- Ellis's technique of monitoring the content that the user consumes automatically captures the user's preferences in near real-time, rather than waiting for the user to manually supply her preferences.
- As the user's preferences change over time, Ellis's technique would update the recommendations to that user accordingly.
- A POSITA would be motivated to combine Sasaki's system for content recommendation with Ellis's enhanced features for recommending content.

See '960 Pet., 24-26; '021 Pet., 25-27; '960 Ex.1003, ¶¶ 59-63;
'021 Ex.1003, ¶¶ 58-62.

'960/'021: Patent Owner asserts that there were technological barriers to combining Sasaki and Ellis.

Patent Owner's Response

barrier to combining the references. The device of Ellis would require a number of antennas and related components that would not be feasible to include in a device with the extended storage and display requirements of Sasaki's terminal. EX2007, ¶121.

'960 POR, 39-40; *see also* '021 POR, 51.

'960/'021: Sasaki's system had antennas, storage and display capabilities for audio and video.

Sasaki

[0029] FIG. 1 is a block diagram illustrating a portable terminal device according to a first embodiment of the present invention. As shown in FIG. 1, the terminal device according to the first embodiment includes a central processing unit (CPU) 1, a read-only memory (ROM) 2, a random access memory (RAM) 3, a hard disk drive (HDD) 4, an operation unit 5, a communication interface 6, a communication terminal 7, an audio output processor 8, a speaker 9, an LCD (liquid crystal display) driver 10, an LCD 11, a communication interface 12, a communication circuit 13, and a transmitting/receiving antenna 14.

'960/'021 Ex.1004, [0029].

The communication interface 12, the communication circuit 13, and the transmitting/receiving antenna 14 can be configured to use various wireless communication standards such as Bluetooth, IEEE (Institute of Electrical and Electronics Engineers) 804.11x, and UWB (Ultra Wide Band).

'960/'021 Ex.1004, [0041].

Dr. Stillerman's Deposition

Q. I'm asking about your understanding as a POSITA. Were the Bluetooth capabilities in 2007 able to transmit audio and video content?

A. So generally speaking, there were -- you know, there were -- there is a Bluetooth capability for transmitting audio. But I certainly haven't considered an answer to that question in the context of the '021 patent.

So generally speaking, Bluetooth can be used to transmit and receive audio.

'960/'021 Ex.1023, 52-53.

So were the -- the Wi-Fi standards, the IEEE Wi-Fi standards in 2007, were they capable of transmitting audio and video content?

MR. HAMILL: Object to form.

THE WITNESS: Generally speaking -- again, not in the context of the claims, but -- using Wi-Fi, you could transmit audio and video.

'960/'021 Ex.1023, 54.

'960 Pet., 48, 57; '021 Pet., 48, 57; '960 Reply, 21-23; '021 Reply, 20-21.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'960/'021: POSITAs were actually combining the technologies to have storage, displays and antennas for audio and video

Apple iPhone

The image shows a product page for the Apple iPhone. On the left, there are three views of the iPhone: a side view showing its thickness, a front view showing the screen with a clownfish wallpaper, and a back view showing the camera lens. Dimensions are provided for each view: 0.46 inches (11.6mm) for thickness, 2.4 inches (61mm) for width, and 4.5 inches (115mm) for height. To the right, there is a 'High Technology' section with a table of technical specifications.

Technical Specifications	
Screen size	3.5 inches
Screen resolution	320 by 480 at 160 ppi
Input method	Multi-touch
Operating system	iOS X
Storage	4GB or 8GB
GSM	Quad-band (MHz: 850, 900, 1800, 1900)
Wireless data	Wi-Fi (802.11b/g) + EDGE + Bluetooth 2.0
Camera	2.0 megapixels
Battery	Up to 5 hours Talk / Video / Browsing Up to 16 hours Audio playback
Dimensions	4.5 x 2.4 x 0.46 inches / 115 x 61 x 11.6mm
Weight	4.8 ounces / 135 grams

[Return to High Technology](#)

'960/'021 Ex.1022.

Patent Owner asserts that Ellis teaches away from a combination with Sasaki.

Patent Owner Response

For these reasons, Ellis's disclosure of determining a user's preferences for radio content is inapplicable to the problem of determining preference information for other types of media disclosed in Sasaki, and a POSITA would not have been motivated to combine the references.

'960 POR, 41; *see also* '021 POR, 53.

Ellis teaches digital radio content and Sasaki is specifically designed to work with digital music content.

Ellis

user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'021 Ex.1005, [0263].

[0002] This invention relates to radio systems and methods. In particular this invention relates to enhanced radio reception and processing features, utilizing multiple radio receivers, digital storage of radio content, independent control of radio reception and playback, listener profiles, and two-way communication features.

'021 Ex.1005, [0002].

Sasaki

ever, the main information is not limited thereto. The content recommendation information represents various types of information concerning a piece of content the user likes (desires to recommend) among pieces of content owned by the user of the terminal device, for example, CD music, still pictures such as electrophotographs and CG (computer graphics) images, DVD video, and text data such as novels.

'021 Ex.1004, [0074].

[0140] As described above, in the above-described embodiments and modifications, the content recommendation information means, not only recommendation information concerning so-called "digital content" such as music and movies, but also, in a broad sense, various types of information, such as traffic information and map information, which is to be transmitted to a communication terminal device for use by the user. Also in this case, if detailed information is necessary, it may be separately acquired.

'021 Ex.1004, [0140].

See '960 Pet., 22-23; '021 Pet., 23-24; '960 Reply, 23; '021 Reply, 22.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'021 Patent:
Sasaki and Ellis teach “podcast media”.

'960/'021: Sasaki and Ellis render obvious “podcast media”.

'021 Patent, Claim 2

2. The one or more NTCRM of claim 1, wherein the audio media comprises music media and **podcast media**.

'021 Ex.1001, Claim 2.

'021: Ellis discloses content recommendation based on podcast media.

Ellis

that artist. In step 1925, a group may be based a particular radio station, and may contain all content broadcast by that station. In step 1930, a group may be based on a specific radio show, and may contain all content broadcast in that show. In step 1935, a group may be based on a particular

'021 Ex.1005, [0214].

[0274] If desired, the user may be allowed to scan in either direction (i.e., through higher radio frequencies or lower radio frequencies). The user may also be allowed to scan across multiple radio sources (e.g., both Internet and radio frequency broadcasts).

'021 Ex.1005, [0274].

[0179] In FIG. 11, flowchart 1100 shows an illustrative process for downloading audio content into an ERS, and is illustratively discussed in conjunction with the block diagram of FIG. 1 and the embodiment of FIG. 6A. This

'021 Ex.1005, [0179].

Lim

[0002] A podcast is a digital recording of a radio broadcast or similar programme, made available on the Internet in a number of separate files for downloading to a personal audio player. Apart from audio content, other digital content such

'021 Ex.1010, [0002].

'021 Patent:

Sasaki and Ellis teach obtaining “information about the media” from a storage within the server.

Sasaki and Ellis render obvious “obtain” “information about the media from a storage within the computer server”.

'021 Patent, Claim 9

9. The one or more NTCRM of claim 1, wherein execution of the instructions is to cause the computer server to:
obtain the media or the information about the media from
a storage within the computer server; or
control receipt of the media or the information about the
media from a remote storage device.

'021 Ex.1001, Claim 9.

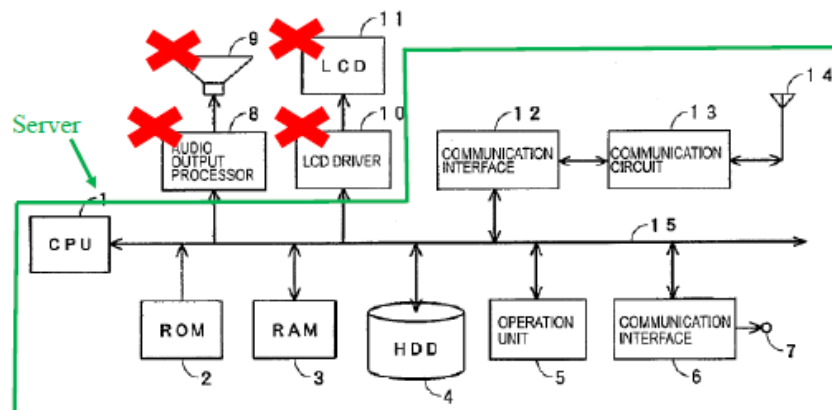
'021: The combination of Sasaki and Ellis teach storing information about the media in the server.

Sasaki

[0119] After establishing the connection, in step S25, the CPU 1 of the server determines whether or not the HDD 4 of the server stores a piece of content recommendation information which matches a preference of the member of terminal device B. In the determination of step S25, the CPU 1 of the server performs processing based on preference information of the member of the terminal device B which is stored in the HDD 4 of the server.

'021 Ex.1004, [0119].

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Ex.1004, Fig. 1 (annotated); Ex.1003, ¶69.

'021 Pet., 30.

Ellis

[0263] FIG. 37 shows flowchart 3700 of an illustrative process to collect and report enhanced radio usage data. The steps of this process may be performed in any suitable order, and any steps may be omitted if desired. In step 3710, the system may collect information on radio stations that the user listens to. The information may include information on days and times that stations were listened to. It may also include information on particular songs, commercials, shows, and other content that the user may have actually heard, as well as indications of content the user may have skipped over.

'021 Ex.1005, [0263].

audio content to store in memory 120 and play back later. In step 3055, the system may report usage data to a central facility.

'021 Ex.1005, [0236].

'960 and '021 Patents:

Dr. Houh's testimony is properly based on evidence.

'960/'021: Dr. Houh's Testimony properly relies on evidence and technical reasoning.

Dr. Houh's Declaration

62. A POSITA would have found the combination of Sasaki with Ellis predictable and would have had a reasonable expectation of success, for several reasons. For example, Sasaki and Ellis are the same type of system, in that both systems use a portable media player device, acquire and save user preferences, and provide recommendations based on user preferences and location. Sasaki's techniques are used in the same scenario as described in Ellis—"content recommendation information ... providing various types of information concerning information and things which are useful for the terminal device's user." Sasaki, [0141]. Moreover, Sasaki teaches a server that provides recommendations and a POSITA would be motivated to learn implementation details for such a server. Correspondingly, Ellis specifically teaches that its techniques can be implemented in a "network component" and/or a "central facility." Ellis, [0162], [0236]. Further, the teachings of Ellis are designed to work in a "wireless network" and "multiple environments" and thus, would be directly usable in a networked event recommendation system, such Sasaki's system. See Ellis, [0162], [0160].

'960 Ex.1003, ¶ 62; see *also* '021 Ex.1003, ¶ 61.

111. Second, Ellis further discloses, as discussed in [1.2], that the recommendation is based on user preferences with respect to "a group [] based on a specific radio show" or radio show broadcast via the internet. Ellis, [0214], [0051]. A POSITA would recognize that a radio show broadcast via the internet, as disclosed in Ellis, corresponds to a podcast media. See Jellison, [0035] ("It may be desired to publish a portion of the radio program as a podcast."); Lim, [0002] ("A podcast is a digital recording of a radio broadcast or similar programme, made available on the Internet in a number of separate files for downloading to a personal audio player.").

'960 Ex.1003, ¶ 111; see *also* '021 Ex.1003, ¶ 115.

222. Further, such combinations were already being implemented by POSITAs. For example, US2006/0258289 to Dua shows a "wireless media player" with both ultra wideband connectivity and a transceiver for "interacting with a cellular network, such as a Global System Mobile (GSM) network." Dua, [0062], [0066].

'960 Ex.1003, ¶ 222; see *also* '021 Ex.1003, ¶ 195.

Inter Partes Review U.S. Patent Nos. 9,141,960 and 10,251,021

Google LLC v. Wildseed Mobile LLC, Cases IPR2023-00246, IPR2023-00244

Andrew Ehmke,
Haynes Boone, LLP

