

FILED ELECTRONICALLY

PATENT APPLICATION
Docket No. 22104.12R

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	US 7,233,790	)
		)
Serial No.:	90/015,063	) Art Unit
		) 3992
Filed:	June 23, 2022	)
		)
Conf. No.:	8395	)
		)
For:	DEVICE CAPABILITY BASED DISCOVERY	)
	PACKAGING AND PROVISIONING OF CONTENT	)
	FOR WIRELESS MOBILE DEVICES	)
		)
Examiner:	Matthew E. Heneghan	)
		)
Customer No.:	22913	)

AMENDMENT "A" AND RESPONSE
AFTER NON-FINAL OFFICE ACTION IN EX PARTE REEXAMINATION

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

Dear Sir:

The pending application is subject to an *ex parte* Reexamination. In response to a Non-Final Office Action, which was mailed on February 2, 2023, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 10 of this paper.

AMENDMENTS TO THE CLAIMS

This listing of claims is to replace all prior versions, and listings, of claims in the pending application:

Listing of Claims:

1. (Amended) A method of providing access to digital content for use on content consuming [wireless communication] devices, the method comprising:

receiving and storing in a server system a plurality of items of digital content [to be made available for use in wireless communication] accessible by the content consuming devices [used by a plurality of wireless services subscribers], including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities; [and]

operating the server system to maintain [maintaining] a product catalog containing a description of the items of digital content, wherein the product catalog includes[including], in association with each item of digital content, a reference to each implementation of said item of digital content[.];

receiving a request from one of the content consuming devices;

in response to the request, selecting a portion of the product catalog to be presented on the one content consuming device, based in part on device capabilities of the one content consuming device; and

presenting the selected portion of the product catalog to the one content consuming device, such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item.

2. (Original) A method of providing access to digital content for use on wireless communication devices, the method comprising:

receiving and storing in a server system a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers, including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;

operating the server system to maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

receiving a request from a wireless device used by one of the subscribers;

in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

presenting the selected portion of the product catalog to the subscriber via a wireless network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.

3. (Original) A method as recited in claim 2, wherein said selecting a portion of the product catalog comprises:

in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and

selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.

4. (Original) A method as recited in claim 2, further comprising:

receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;

selecting an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and

downloading the selected implementation of the item of digital content to the wireless device used by the subscriber.

5. (Original) A method as recited in claim 4, further comprising associating each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities, each provisioning model including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.

6. (Original) A method as recited in claim 5, further comprising:

receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;

identifying device capabilities of the wireless device used by the subscriber;

selecting one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber;

packaging the requested item according to the selected provisioning model; and

provisioning the requested item in the wireless device used by the subscriber according to the selected provisioning model.

7. (Original) A method as recited in claim 6, wherein:

said packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and

said provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

8. (Amended) A system that provides access to digital content for use on content consuming devices, said system comprising:

a network interface through which to communicate over a communication network; and
an application server [download manager] to:

receive and store a plurality of items of digital content [to be made available for use in wireless communication] accessible by the content consuming devices [used by a plurality of wireless telecommunications subscribers], including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities; [and]

maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes[including], in association with each item of digital content, a reference to each implementation of said item of digital content[.];

receive a request from one of the content consuming devices;

in response to the request, select a portion of the product catalog to be presented on the one content consuming device, based in part on device capabilities of the one content consuming device; and

present the selected portion of the product catalog to the one content consuming device, such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item.

9. (Original) A system comprising:

a processor; and

a storage facility accessible to the processor and containing code which, when executed by the processor, causes the processing system to receive and store a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers, including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;

maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

receive a request from a wireless device used by one of the subscribers;

in response to the request, select a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

cause the selected portion of the product catalog to be presented to the subscriber via a wireless telecommunications network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.

10. (Original) A system as recited in claim 9, wherein selection of said portion of the product catalog comprises:

in response to the request, determining the identity of the wireless device used by the subscriber, wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and

selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.

11. (Original) A system as recited in claim 10, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to:

receive from the subscriber a request for one of the items of digital content in said portion of the product catalog;

select an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and

download the selected implementation of the item of digital content to the wireless device used by the subscriber.

12. (Original) A system as recited in claim 11, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to:

associate each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities, each of the provisioning models including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.

13. (Original) A system as recited in claim 12, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to:

receive from the subscriber a request for one of the items of digital content in said portion of the product catalog;

identify device capabilities of the wireless device used by the subscriber;

select one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber;

package the requested item according to the selected provisioning model; and

provision the requested item in the wireless device used by the subscriber according to the selected provisioning model.

14. (Original) A system as recited in claim 13, wherein packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and
wherein provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

REMARKS

The Non-Final Office Action for the pending *ex parte* Reexamination was mailed on February 2, 2023. The Office Action considered claims 1, 2, 4, 8, and 9. Claims 3, 5, 6, 7, 10, 11, 12, 13, and 14 were not considered. Claims 2, 4, and 9 were confirmed. Claims 1 and 8 were rejected.

By this paper, claims 1 and 8 are amended. No claims have been added or cancelled.

Status Regarding Claim Amendments

As indicated above, the present application includes pending claims 1-14, with claims 1, 2, 8, and 9 being independent claims. With this amendment, Applicant has amended independent claims 1 and 8, as described below. Support for the amendments can be found throughout US 7,233,790. Specific passages of support from the '790 patent publication are referenced below.

Claim 1

Claim 1 has been amended in lines 1, 3, 6, 7, 10, 11, 12, and 19 to include the term "digital" as it relates to the "content" that is being used by the devices. Support for "digital content" can be found, for example, in col. 3 ln. 45-50.

Claim 1 has been further amended to substitute the phrase "content consuming devices" for "wireless communication devices" in lines 1, 2, and 4. Lines 13, 15, 16, 17, 18, and 19 also reference "content consuming devices." Support for this amendment can be found, for example, in col. 3 ln. 48-57 (e.g., referring to how a device is able to use content that has been designed for that device). The patent specification is explicitly clear that "the techniques described herein need not be limited to wireless services subscribers or mobile client devices." (*see e.g.*, col. 4, ln. 26-33). The prior art of record is not solely distinguishable on the lone basis of wireless communication devices.

Claim 1 has been further amended to recite a "server system" in lines 3 and 9. Support for this amendment can be found, for example, in col. 3 ln. 65-67.

In claim 1, the limitation "to be made available for use in wireless communication" has been removed from ln. 3-4. Condensed language (i.e. "accessible by") has been used in place of the removed phrase. These amendments were made to improve the readability of the claim and to make the claim more concise. Support for this amendment can be found, for example, in col. 2 ln. 50-52 and col. 4 ln. 23-25.

In claim 1, the phrase "used by a plurality of wireless services subscribers" has been removed from ln. 4-5. The removal of this language was also intended to improve the readability of the claim and to be consistent with the specification's explicit disclosure.

Claim 1 has been further amended to recite receiving "and storing" the different implementations in ln 5. Support for this amendment can be found, for example, in col. 11 ln. 56-58.

In claim 1, the term "maintaining" was changed to "maintain" in line 9 to ensure proper grammar.

In claim 1, the term "including" was changed to "includes" in line 10 to also ensure proper grammar.

Claim 1 was further amended to include the following limitation in ln. 13: "receiving a request from one of the content consuming devices." Support for this amendment can be found, for example, in col. 12 ln. 9-13.

Claim 1 was further amended to include the following limitation in ln. 14-16: "in response to the request, selecting a portion of the product catalog to be presented on the one content consuming device, based in part on device capabilities of the one content consuming device." Support for these amendments can be found, for example, in col. 9 ln. 13-18 as well as col 9 ln. 37-62.

Claim 1 was further amended to include the following limitation in ln. 17-20: "presenting the selected portion of the product catalog to the one content consuming device, such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item." Support for this amendment can be found, for example, in col. 9 ln. 49-56.

Claim 8

Claim 8 has been amended to include the following limitation in ln. 1-2: "that provides access to digital content for use on content consuming devices, said system..." Support for the amendment can be found, for example, in col. 3 ln 45-57 as well as col. 4 ln. 23-25.

In claim 8, the phrase "download manager" has been replaced with "application server" in ln 4. Support for the amendment can be found, for example, in col. 3 ln. 67.

Claim 8 has been amended in lines 5, 8, 9, 11, 12, 13, 20 to include the term "digital" as it relates to the "content" that is being used by the devices. Support for "digital content" can be found, for example, in col. 3 ln. 45-50.

Claim 8 has been further amended to substitute the phrase "content consuming devices" for "wireless communication devices" in lines 1, 2, 6, 14, 16, 17, an 18. Support for this amendment can be found, for example, in col. 3 ln. 48-57 (e.g., referring to how a device is able to use content that has been designed for that device). The patent specification is explicitly clear that "the techniques described herein need not be limited to wireless services subscribers or mobile client devices." (*see e.g.*, col. 4, ln. 26-33). The prior art of record is not solely distinguishable on the lone basis of wireless communication devices.

In claim 8, the limitation "to be made available for use in wireless communication" has been removed from ln. 5-6. Condensed language (i.e. "accessible by") has been used in place of the removed limitation to improve the readability of the claim and to make the claim more concise. Support for this amendment can be found, for example, in col. 2 ln. 50-52 as well as col. 4 ln. 23-25.

In claim 8, the phrase "used by a plurality of wireless services subscribers" has been removed from ln. 6-7 to improve the readability of the claim and to be consistent with the specification's explicit disclosure.

Claim 8 has been further amended to recite receiving "and storing" the different implementations in ln 7. Support for this amendment can be found, for example, in col. 11 ln. 56-58.

In claim 8, the term "including" was changed to "includes" in line 12 to also ensure proper grammar.

Claim 8 was further amended to include the following limitation in ln. 14: "receive a request from one of the content consuming devices." Support for this amendment can be found, for example, in col. 12 ln. 9-13.

Claim 8 was further amended to include the following limitation in ln. 15-17: "in response to the request, select a portion of the product catalog to be presented on the one content consuming device, based in part on device capabilities of the one content consuming device." Support for these amendments can be found, for example, in col. 9 ln. 13-18 as well as col. 9 ln. 37-62.

Claim 8 was further amended to include the following limitation in ln. 18-21: "presenting the selected portion of the product catalog to the one content consuming device, such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item." Support for this amendment can be found, for example, in col. 9 ln. 49-56.

Introductory Discussion Of The Claims

Independent claims 1 and 8 are directed to embodiments that provide access to digital content for use on content consuming devices. Claim 1, for example, is focused on a method that includes receiving and storing (e.g., in a server system) multiple items of digital content that are accessible by the content consuming devices. This action includes receiving and storing multiple different implementations of at least one of the items of digital content, where each implementation corresponds to a different set of device capabilities.

The method includes operating the server system to maintain a product catalog. This catalog includes a description of the items of digital content. The product catalog includes, in association with each item of digital content, a reference to each implementation.

The method also includes an action of receiving a request from one of the content consuming devices. In response, a portion of the product catalog is selected to be presented on the one content consuming device. This selection is based in part on the device capabilities of the one content consuming device.

The method then involves presenting the selected portion of the product catalog to the one content consuming device. As a result, the selected portion, as presented, provides a single description of each item of digital content in the portion, regardless of the number of implementations that are available for each item.

Interview Summary

Initially, Applicant thanks the Examiner for the courtesies extended during the recent interview held on March 22, 2023. During the course of the interview, the parties discussed a proposed set of amendments that related to the selection of a portion of the product catalog, where that portion was determined to be supported by the device. The amendments further related to the presentation of that selected portion to the device.

The amendments were discussed in view of the cited references. Applicant and the Examiner discussed in detail para. [0015] of the Senoh reference and how one object of the Senoh reference was to "enable[] a user to enjoy content in the format of a display device that is different from the specifications of the user terminal."

No agreement was reached regarding allowability of the claims at the time of the interview. The Examiner did suggest adding additional limitations (e.g., limitations similar to those present in independent claim 2) to further bolster the position of the claims.

35 U.S.C. §103 Rejections

Claims 1 and 8 were rejected under pre-AIA 35 U.S.C. §103(a) as being unpatentable in view of Senoh (US 2002/0078178) and Agraharam (US 6,035,339). In view of the current amendments, Applicant respectfully submits that the claimed embodiments are distinguishable over the cited references (either collectively or individually).

Briefly, Senoh describes a technique for distributing differently formatted content using a relay server. For example, para. [0029] mentions the following: "The content server 3 then sends the requested content to the relay server 2 in a first format specification." "The relay server 2 converts the content received from the content server 3 in the first format to a second format specification, and sends the reformatted content to the user terminal 1." Para. [0015] also says the following: "By converting content from a first format specification to a second format specification and sending the reformatted content to a viewer (user) terminal, the content

distribution system of the present invention enables a user to enjoy content in the format of a display device that is different from the specifications of the user terminal."

Agraharam describes a system capable of determining the "output requirements" for an end-user terminal. For instance, as mentioned in col. 5 ln. 20-23, Agraharam's "controller 302 determines the end-user information output requirements and then ... packages the information based on the end-user information output requirements."

Claims 1 and 8 (hereinafter simply referred to as "the claims") have been amended to include subject matter that is quite similar to the subject matter presented in claim 2, which was found to be confirmed in view of the cited art, including Senoh and Agraharam. On pages 7-8 of the Office Action, the Office stated the following:

Regarding claims 2 and 9, the only primary reference considered, Senoh, explicitly teaches away from "selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and presenting the selected portion of the product catalog to the subscriber via a wireless network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item," as recited in claims 2 and 9. Senoh specifically states that it is an objective to enable a viewer terminal to enjoy content in the format of a display device that is different from the specifications of the user terminal (see paragraphs 8 and 15).

The claims have been amended to include similar limitations as those presented in claims 2 and 9. For the Office's convenience, a comparison chart for particular aspects of the claim language is provided below. The portions underlined represent some minor deviations between the claims.

Claim 1 (with claim 8 being similar)	Claim 2
receiving a request from <u>one of the content consuming devices</u> ;	receiving a request from <u>a wireless device used by one of the subscribers</u> ;
in response to the request, selecting a portion of the product catalog to be presented <u>on the one content consuming device</u> , based in	in response to the request, selecting a portion of the product catalog to be presented <u>to the subscriber</u> , based on device capabilities

<u>part</u> on device capabilities of the <u>one content consuming device</u> ; and	of the <u>wireless device used by the subscriber</u> ; and
presenting the selected portion of the product catalog to the <u>one content consuming device</u> , such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of <u>a</u> number of implementations <u>that are available for</u> each said item.	presenting the selected portion of the product catalog to the <u>subscriber via a wireless network</u> , such that the selected portion, as presented <u>to the subscriber</u> , provides <u>only</u> a single description of each item of digital content in said portion, regardless of the number of implementations <u>of</u> each said item.

As can be observed from the above language, the limitations of claim 1 (with claim 8 including similar amendments) now very closely track the limitations of claim 2. Minor differences are present between claims 1 and 2 (and 8) to ensure that they are of at least somewhat different scope.

One difference to particularly note between the claims is that claims 1 and 8 now reference a "content consuming device" whereas claim 2 references a "wireless device." Applicant respectfully submits that the substitution of "content consuming device" for "wireless device" should not significantly impact the analysis on patentability. As indicated above, such a change was made to ensure that claims 1 and 8 are not simply unnecessary duplicates of claim 2. To that end, the patent specification is explicitly clear that "the techniques described herein need not be limited to wireless services subscribers or mobile client devices." (*see e.g.*, col. 4, ln. 26-33). Importantly, the prior art of record is not solely distinguishable on the lone basis of wireless communication devices.

Another difference to note is the omission of the modifier "only" in the last limitation of claims 1 and 8 as compared to claim 2. After reviewing the language of claim 2, Applicant respectfully submits that the modifier "only" is a repetitive modifier in view of the modifier "single," as it relates to the "single description" limitation.

That is, the grammatical modifiers "only" and "single" are related to the digital content descriptions that are provided to the content consuming device. The modifier "single" incorporates the meaning of "only". Using both modifiers results in repetitive language. Applicant has elected to omit the modifier "only" so as to improve the readability of the claims and to make

the claims more concise, such as by removing repetitive language. As a result, Applicant respectfully submits that the modifier "only" can be removed without impacting the analysis on patentability. To further support such an assertion, consider the following.

The claims include a limitation in which the selected portion of the product catalog is presented to the content consuming device. Notably, the selected portion "provides a single description of each item of digital content ... regardless of a number of implementations that are available for" that item. In other words, this language says that regardless of how many implementations are available for an item, the portion of the product catalog that is presented to the content consuming device will include a "single description" for each such item. Use of the modifier "single" limits the claims to a scenario in which one (and only one) description of each item of content will be provided.

Claim 2 includes similar language but further includes the repetitive modifier "only." For instance, claim 2 requires that the selected portion "provides only a single description of each item ... regardless of the number of implementations of" that item. In this context, the modifiers "only" and "single" limit the claims in the same way and thus are redundant. That is, one description (not more than one) for an item will be provided to the content consuming device, regardless of how many implementations for that item might be available.

In view of the repetitive nature of the modifiers "only" and "single" (as used in this instance), Applicant respectfully submits that omitting the modifier "only" from claims 1 and 8 should not impact the analysis on patentability.

Furthermore, inasmuch as claims 1 and 8 now include substantially similar limitations as those found in claim 2, Applicant respectfully submits that claims 1 and 8 should be found to be allowable over the cited art for the same reasons that claim 2 was found to be allowable. More particularly, claims 1 and 8 should be found to be allowable over the combination of Senoh and Agraharam because that combination of art fails to teach or suggest any embodiment that requires at least the following features (when combined with the other limitations of the claims):

*receiving a request from one of the content consuming devices;
in response to the request, selecting a portion of the product catalog to be
presented on the one content consuming device, based in part on device
capabilities of the one content consuming device; and
presenting the selected portion of the product catalog to the one content
consuming device, such that the selected portion, as presented, provides a single
description of each item of digital content in said portion, regardless of a number
of implementations that are available for each said item.*

Accordingly, for at least these reasons, as discussed above, the pending claims should be found to be distinguished from and patentable over the cited art and rejections of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at 801-533-9800.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this 31st day of March 2023.

Respectfully submitted,

/Levi S. Brown/

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