Datasheet for the decision of 7 April 2014

Case Number: T 0246/13 - 3.5.07
Application Number: 05823337.0
Publication Number: 1805668
IPC: G06F17/30

Language of the proceedings: EN

Title of invention:
Synchronization and Conversion of Media Data for Mobile Users

Applicant:
Apple Inc.

Headword:
Synchronization and conversion of media data/APPLE

Relevant legal provisions:
EPC Art. 54, 123(2)

Keyword:
Amendments - extension beyond the content of the application as filed (no)
Novelty - main request and first auxiliary request (no) - second auxiliary request (yes)
Remittal to the department of first instance

Decisions cited:

Catchword:
Case Number: T 0246/13 - 3.5.07

DECISION of Technical Board of Appeal 3.5.07 of 7 April 2014

Appellant: Apple Inc. (Applicant)
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Decision under appeal: Decision of the Examining Division of the European Patent Office posted on 13 June 2012 refusing European patent application No. 05823337.0 pursuant to Article 97(2) EPC.

Composition of the Board:
Chairman: R. Moufang
Members: M. Rognoni
P. San-Bento Furtado
Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the examining division to refuse European patent application no. 05823337.0.

II. In the decision under appeal, the examining division held, inter alia, that the subject-matter of claim 1 according to the main request and the first auxiliary request lacked an inventive step with respect to the following prior art document:


Furthermore, the examining division considered that requesting characteristics of a mobile device prior to converting media on a media server was known in the art, as shown by the following document:


III. With the statement of grounds of appeal, the appellant filed a main request and an auxiliary request corresponding to the requests considered in the contested decision.

IV. In a communication dated 26 November 2013 summoning the appellant to oral proceedings, the Board drew the appellant's attention to the following document:

Furthermore, the Board expressed the preliminary view that D7 disclosed a method falling within the terms of claims 1 according to the main request and the auxiliary request (Article 54 EPC).

V. In reply to the Board's communication, the appellant, with letter dated 7 March 2014, resubmitted the main request unchanged, amended the first auxiliary request and filed a second auxiliary request.

VI. On 7 April 2014, oral proceedings before the Board were held as scheduled. During the oral proceedings, the appellant withdrew the first and second auxiliary requests on file and submitted new first and second auxiliary requests.

VII. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request, filed with letter dated 7 March 2014, or one of the first and second auxiliary requests submitted at the oral proceedings before the Board.

VIII. Claim 1 according to the main request reads as follows:

"A method (200) for synchronizing media assets to a media device (102) from a host computer (104), said method being carried out by the host computer and comprising:

obtaining (204) at the host computer media device capabilities for the media device;

identifying (208) original media assets (112) on the host computer that are to be copied to the media device to synchronize the media assets to the media device from the host computer;
determining (210) media formats appropriate for the media device based on the media device capabilities;
generating (212), for each of the original media assets, a set of media assets (114) formatted in accordance with the media formats; and
copying (214) the set of media assets from the host computer to the media device (102)."

Claim 1 according to the first auxiliary request differs from claim 1 of the main request in that it further comprises the following features:

"wherein the host computer comprises a database of media information stored on the host computer, and the media device comprises a database of media information stored on the media device, and
wherein the step of identifying original media assets to be copied comprises a step of comparing the media information stored in the respective databases, and identifying media assets resident on the host computer but not on the media device."

Claim 1 according to the second auxiliary request reads as follows:

"A method (200) for synchronizing images to a media device (102) from a host computer (104), said method being carried out by the host computer and comprising:

obtaining (204) at the host computer media device capabilities for the media device;

identifying (208) original images (112) on the host computer that are to be copied to the media device to synchronize the images to the media device from the host computer;"
determining (210) display formats supported or desired by the media device based on the media device capabilities, wherein the display formats pertain to different pixel sizes;

generating (212), for each of the original images, a set of rendered images (114) formatted in accordance with the display formats pertaining to different pixel sizes; and

copying (214) the set of rendered images from the host computer to the media device so the media device is able to rapidly display an image using an associated one of the rendered images (102), [sic]"

All requests comprise further independent claims and dependent claims. As these claims are not relevant to the outcome of the appeal, their wording need not be given.

IX. The appellant argued essentially as follows:

Claim 1 of the main request defined a method for providing media assets to a media device from a host computer. According to the claimed method, the original media assets on the host computer to be copied to the media device were identified. The media formats appropriate for the media device were determined based on the media device capabilities that the host computer had obtained from the media device. Once the media formats had been determined, for each of the original media assets, a set of formatted media assets was generated on the host computer in accordance with the media formats corresponding to the media device capabilities. In particular, claim 1 recited that a set of formatted media assets was generated for each of the original media assets being processed.
Although D7 taught replacing or omitting information relating to colours from media assets to be transferred to a media device, thereby converting media content to a new form (e.g. grey scale), the invention as defined by claim 1 consisted in generating a set of media assets formatted differently for each of the media assets to be copied from the host computer to the media device. Nothing in D7 taught or suggested generating a set of media assets with different media formats for each original media asset, as required by claim 1. Further, since the only examples in D7 of "transformation" were in regard to omission or replacement of information which the media device could not handle, rather than conventional file format conversion such as change of codec/encoding, it was not clear how it could be easily adapted to provide a set of formats for each individual content. Indeed, it could be questioned whether omission of colours or replacement of a colour with grey would be considered by the skilled person to be a change of format. However, even if the omission of colours was considered to be a kind of file conversion to a new format, it was questionable whether D7 taught to actually predetermine the format appropriate for the media device in order to generate content according to that determination.

As indicated in paragraph [0061] of the application as published, synchronizing media assets, such as images, by providing, for each media asset, a set of formats appropriate for the device implied that the formatted assets could be accessed at the media device in a manner that was "responsive and efficient (in terms of processing operations and power consumption of the device)".
In summary, the subject-matter of claim 1 according to the main request was new and inventive with respect to D7.

Claim 1 according to the first auxiliary request clarified that the host computer and the media device comprised databases of media information, and that the step of identifying original media assets to be copied to a media device involved the comparison of media information stored in the respective databases of the host computer and of the media device, and the identification of media assets by means of database comparison. Document D7 did not teach storing media information relating to media assets available on the host computer and on the media device. First of all, the term "media information" in the application designated information relating to the content of the media assets. The method of D7 made indeed use of a file which contained some information on the files stored on the host computer and on the media device. However, this information could just relate to file names, and not to the actual file content. Storing databases of media information allowed a comparison of media assets based on their content. So it was possible to avoid copying again media assets, such as songs, which might be already stored on the media device under different file names or forms. In summary, the essential features that distinguished the first auxiliary request from the main request were that the determination of the media assets to be copied was carried out by means of databases, that the databases contained information relating to media assets and in particular to their contents, and that media information allowed the identification of media assets on the basis of media content. As these particular features were not known from document D7, the method according to claim 1 of
the first auxiliary request satisfied the requirement of novelty (Article 54 EPC).

Claim 1 according to the second auxiliary request was based on a combination of claims 1, 2, 4, 6 and 11 of the main request and found further support in paragraphs 26 and 32 of the published application. The claimed method was now limited to the synchronization of images and to the fact that before synchronization the images were converted into display formats compatible with the media player. The wording of claim 1 thus clarified that the plurality of formats were display formats and that they were generated for each of the images to be transferred to the media player, so that the transferred images were available for display as soon as the synchronization was completed.

In summary, the underlying idea of the invention, as set out in claim 1 of the second auxiliary request, was to shift to the host computer the burden of processing required for converting images into appropriate display formats. This approach freed processing power and reduced power consumption at the media device.

None of the cited documents taught to perform the synchronization of images to a media player by converting the images into a plurality of display formats compatible with the media player and by copying for each image a set of rendered images so that the user had a selection of different display formats. Consequently, the subject-matter of claim 1 according to the second auxiliary request satisfied the requirements of Articles 54 and 56 EPC.
Reasons for the Decision

Admissibility

1. The appeal is admissible.

Main request

2. Claim 1 according to the main request relates to a method for synchronizing media assets to a media device from a host computer. The claimed method is carried out by the host computer and comprises the following steps:

   (a) obtaining at the host computer media device capabilities for the media device (whereby the Board understands that the host computer obtains information about the media device capabilities);

   (b) identifying original media assets on the host computer that are to be copied to the media device to synchronize the media assets to the media device from the host computer;

   (c) determining media formats appropriate for the media device based on the media device capabilities;

   (d) generating, for each of the original media assets, a set of media assets formatted in accordance with the media formats; and

   (e) copying the set of media assets from the host computer to the media device.
3. According to the examining division (cf. communication dated 25 November 2011, point 19) step (d) merely implied that at least one original media asset was converted into at least one formatted media asset, since "sets" were one of the most fundamental concepts in mathematics and "a set" could contain a single item.

3.1 In the letter dated 7 March 2014, the appellant argued, inter alia, that the word "set" in the context of the invention clearly referred to a plurality. This common and straightforward interpretation was further supported within the claim itself which stated that the assets were formatted "in accordance with the media formats", not "one" or even "one or more". Since a single copy of an asset could not have multiple formats at once, this use of the plural necessarily implied that the set of media assets relating to each of the original media assets was a plurality. Hence, in the appellant's view step (d) meant that each one of the original media assets was converted into a plurality of media formats.

4. Apart from the fact that "a set" as a mathematical entity may indeed contain a single item or no item at all, the Board considers that the appellant's interpretation of step (d) is not wholly consistent with the remaining features of claim 1 and with the general teaching a skilled person would derive from the application as filed.

4.1 Claim 1 relates to the synchronization of unspecified "media assets", such as audio, image, video files etc. (see paragraphs [0021], [0036], [0066] and [0068] of the published application), which necessarily have different original formats. The synchronization of different types of media assets to a media device
implies the determination, for each type of media assets, of at least one media format compatible with the media device.

Step (e) implies that the synchronization of [a plurality of original] media assets to the media device is carried out by "copying the set of media assets" generated in accordance with the media format capabilities of the media device, as specified in step (d). Thus, in step (e) the "set of media assets" should refer to all the suitably formatted media assets which are to be copied to the media device when the [original] media assets are synchronized from the host computer to the media device. In other words, copying the set of media assets referred to in step (e) and defined in step (d) should result in the synchronization of all media assets identified in step (b), if the aim of the claimed method (synchronization of media assets) is to be achieved.

4.2 On the other hand, it is true that, taken by itself, step (d) indeed appears to mean that each one of the original media assets is converted into a set of formatted media assets. This interpretation would, however, imply that by copying one set of media assets to the media device, as recited in step (e), only the synchronization of a single media asset was performed. This cannot be the case if the claimed method is to solve the problem of synchronizing a plurality of media assets between the host computer and the media device. This inconsistency can be overcome if the "set of media assets" referred to in step (d) is interpreted as encompassing all the appropriately formatted media assets corresponding to the media assets identified in step (b).
4.3 Furthermore, as the claim is not limited to any particular type of media assets, its wording covers also the synchronization of different types of media assets. Evidently, each type will be formatted in accordance with the media formats compatible with the media device. In the case of multiple types of media assets, the expression "for each of the original media assets" could also be interpreted in the sense that for each type of original media assets a set of formatted media assets corresponding to this media type is generated. Copying one set of formatted media assets would synchronize the corresponding type of original media assets.

4.4 In other words, for the claimed subject-matter to have consistent technical meaning and fulfill its purpose, namely the synchronization of media assets, the expression "for each of the original media assets" cannot be taken literally.

Apart from the inconsistencies in the wording of claim 1 mentioned above, there is no indication in the application as filed as to why media assets other than images should be converted into a plurality of appropriate formats to be copied to a media device with an intrinsically limited storage capacity.

Furthermore, the Board notes that it is explicitly mentioned in paragraph [0068] of the published application that "a portable media device can receive media assets (e.g. images) from a host computer in one or more formats that are useful to the portable media device" (underlining added).

4.5 In summary, the Board finds that the interpretation of step (d) of claim 1 given by the appellant is not
consistent with the other steps recited in claim 1 and
in particular with a method which, in principle, is
directed to the synchronization of any type of media
assets.

According to the interpretation of claim 1 which the
Boards finds more convincing in the light of the
teaching disclosed in the application as filed,
synchronization of [original] media assets to a media
device is carried out by generating on the host
computer a set of formatted media assets corresponding
to the [original] media assets identified for download
to the media device and by copying this set of media
assets from the host computer to the media device, so
as to achieve synchronization of all [original] media
assets.

4.6 Consequently, novelty of the subject-matter of claim 1
is to be examined in the light of the above
interpretation.

5. Document D7 relates to a "method and system for
transferring offline browsing content information of a
wide area network from a host computer to a mobile
device" which "includes connecting the mobile device to
the host computer and obtaining characteristic
information of the mobile device pertaining to at least
one of hardware and software capabilities of the mobile
device. The content information is transferred from the
host computer to the mobile device as a function of the
characteristic information" (see D7, column 2, Summary
of the Invention - underlining added).

5.1 Figure 1 shows a simplified block diagram of a system
according to D7 which comprises a mobile device 18, a
host computer 16 and a "content provider" 12 connected
to the host computer through a wide area network ("Internet"). As pointed out in column 3, lines 5 to 13, the content is downloaded to the host computer in standard formats, such as HTML, JPEG, GIF or WAV data files.

5.2 As specified in column 3, lines 43 to 47, "the user can specify preferences or download options for the content download process. For instance, images and sound clips found during the download process can or cannot be made available for offline browsing" (underlining added).

5.3 The operation of the system disclosed in D7 is summarized in column 3, lines 50 to 65 as follows:

"Downloading module 20 stores the CDF [Channel Definition Format] file, if available, or alternatively generates a CDF file for the site of the content provider. The CDF file is also stored in cache 22. The content and CDF file stored in cache 22 is transferred from the desktop computer 16 to mobile device 18 through synchronization modules 24 and 26. The content and CDF file is stored locally on mobile device 18 in cache 28. A second aspect of the present invention includes a content filter module 30, located on desktop computer 16, that operates upon the content data from cache 22, and filters or transforms the content as a function of characteristics of the type of mobile device 18. This minimizes content data stored in cache 28 where memory or storage capabilities are typically limited. A browser module 32 is provided on mobile device 18 to access the CDF file in cache 28 to render content during offline browsing" (underlining added).

5.4 In particular, "desktop computer 16 includes synchronization module 24. Briefly, synchronization
module 24 is configured to interact with synchronization module 26 on mobile device 18 such that data which are the subject of synchronization can be synchronized from desktop computer 16 to mobile device 18, or vice versa. Once synchronized, both files (those on desktop computer 16 and mobile device 18) contain up to date information” (D7, column 3, line 66 to column 4, line 6 - underlining added).

5.5 The operation of the system known from D7 is schematically illustrated in Figure 6. In particular the steps required to transfer media files from the host computer to the mobile device are explained as follows (see column 10, line 64 to column 11, line 32):

"downloading content from desktop computer 16 to mobile device 18 includes, at step 162, obtaining characteristic information about mobile device 18, such as video display capabilities, audio display capabilities, browser 32 capabilities, or other information related to the hardware or software on mobile device 18 that is implemented during offline browsing. Typically, characteristics of mobile device 18 include the type and model of mobile device 18 as well as the type, model or version level of hardware and software components of mobile device 18. Such information is commonly maintained by operating system 40 (FIG. 2) and can be accessed and transferred to desktop computer 16 using well-known API calls.

At step 166, content from cache 22 of desktop computer 16 is transferred to cache 28 of mobile device 18 using synchronization modules 24 and 26. However, as will be described below, content data is filtered or transformed by filter module 30 in accordance with characteristics or capabilities of mobile device 18 as
obtained from seep [sic] 162. Filtering of content data prior to transfer and storage in cache 28 is particularly advantageous dale [sic] to the limited memory resources commonly found in mobile devices. For instance, if mobile device 18 cannot support or render a particular form of content downloaded from content provider 12, filtering module 30 can omit this information prior to transfer to mobile device 18. In another example, mobile device 18 can have limited or no ability to display colors. Accordingly, filtering module 30 can replace or omit information related to colors, and thereby, convert the content to be displayed in a format which is more suitable for the mobile device 18, such as a gray-scale format. Typically, images displayed in color require considerably more bytes than that necessary to display the same image using a gray-scale format. By converting the image data to the gray-scale format prior to storage in cache 28, considerable storage savings can be realized" (underlining added).

5.6 In summary, the method disclosed in D7 comprises the steps of obtaining the capabilities of the media device, identifying original media assets on the host computer that are to be copied to the media device, determining media formats appropriate for the media device based on those capabilities, generating, for the identified original media assets, a set of media assets formatted in accordance with the media formats compatible with the media device and copying the set of media assets to the media device. These steps correspond to the steps recited in claim 1 of the main request and interpreted as pointed out above (see point 4.5).
5.7 As D7 discloses a method for synchronizing different types of media assets falling within the terms of claim 1 of the main request, the claimed subject-matter lacks novelty within the meaning of Article 54 EPC.

First auxiliary request

6. Claim 1 according to the first auxiliary request differs from claim 1 of the main request in that it further comprises the following features:

(f) the host computer comprises a database of media information stored on the host computer,

(g) the media device comprises a database of media information stored on the media device,

(h) the step of identifying original media assets to be copied comprises a step of comparing the media information stored in the respective databases, and

(i) identifying media assets resident on the host computer but not on the media device.

As explained by the appellant, the above features clarify that the step of identifying the original media assets to be copied from the host computer to the media device is carried out by comparing media information stored in corresponding databases of the host computer and of the media device.

6.1 According to D7 (column 3, lines 53 to 55), the "content and CDF file stored in cache 22 is transferred from the desktop computer 16 to mobile device 18 through synchronization modules 24 and 26. The content
and CDF file is stored locally on mobile device 18 in cache 28”.

In the Board's opinion, the data stored in caches 26 and 28 can be regarded as databases containing information relating to the media files stored on the host computer and the media device, respectively. A two-way synchronization (see D7, column 3, last line to column 4, line 6) necessarily implies the step of comparing the media file information stored in caches 26 and 28.

6.2 The appellant has essentially argued that the content of a CDF file was not media information in the sense of claim 1 of the first auxiliary request, since the latter identified the actual content of media assets and allowed synchronization of media assets while excluding the transfer of duplicate media assets with different file attributes.

6.3 In paragraph [0025] (last three sentences) the present application specifies the following:

"In one embodiment, the media information includes media attributes of the media assets which can be compared to determine which media assets are to be transferred. In one example, the media attributes include at least a title and an artist name for media assets that are audio files. In another example, the media attributes include an identifier, a modification date and a size for media assets that are image files" (underlining added).

Hence, at least in the case of image files, media information may pertain to file attributes, and not to
the actual media content of the corresponding media assets.

As to the Channel Definition Format (CDF) file, "[it] provides a local index or hierarchical structure of the content available from content provider 12. [...] The Channel Definition Format is an open specification that permits a content provider to offer frequently updated collections of information, or channels, from any server for delivery to compatible receiver programs (browsers) on desktop computer or other information appliances" (D7, column 3, lines 24 to 32).

6.4 In so far as the CDF files provide information allowing the identification of media assets downloaded from Web sites and stored on a host computer and a media device, they represent "media information" within the meaning of the disclosure of the present application, and features (f) to (i) are anticipated by D7.

6.5 As D7 discloses a method comprising not only the common features of claims 1 of the main and first auxiliary requests, but also the additional features (f) to (i), the subject-matter of claim 1 according to the first auxiliary request does not fulfill the requirement of novelty (Article 54 EPC).

Second auxiliary request

7. Claim 1 according to the second auxiliary request relates to a method for "synchronizing images" to a media device from a host computer. The method is carried out by the host computer and comprises the following steps:
(a) obtaining at the host computer media device capabilities for the media device;

(b') identifying original images on the host computer that are to be copied to the media device to synchronize the images to the media device from the host computer;

(c') determining display formats supported or desired by the media device based on the media device capabilities, wherein the display formats pertain to different pixel sizes;

(d') generating, for each of the original images, a set of rendered images formatted in accordance with the display formats pertaining to different pixel sizes; and

(e') copying the set of rendered images from the host computer to the media device so the media device is able to rapidly display an image using an associated one of the rendered images.

8. Claim 1 according to the second auxiliary request thus differs from claim 1 of the main request in that:

- the claimed method relates to the synchronization of images from a host computer to a media device;

- it implies that different display formats are supported or "desired" by the media device, whereby the display formats pertain to pixel sizes;

- a set of rendered images in different display formats is generated from an original image;
the set of rendered images is copied from the host computer to the media device so that the media device can rapidly display, without further processing, an image using one of the display formats.

8.1 Although the wording of step (d') is structured in the same way as step (d) of claim 1 according to the main request, it relates to the rendering of each of the original images into display formats pertaining to different pixel sizes. Furthermore, step (e') implies that by transferring the set of rendered images corresponding to one original image from the host computer to the media device, a rendered image of the original image can be rapidly displayed.

8.2 These aspects of the invention relating to the synchronization and formatting of images find support in the application as originally filed (see in particular paragraphs [0035] and [0036], and dependent claims 2 to 4, 6 and 7). It is in particular specified in the description (page 19, penultimate line to page 20, second line) that "the image file(s) can be formatted (e.g. rendered) in advance at the host computer so that display of the image file(s) at the media device 600 is responsive and efficient (in terms of processing operations and power consumption at the media device)". Furthermore, another "advantage of the invention is that a portable media device can receive media assets (e.g. images) from a host computer in one or more formats that are useful to the portable media device" (page 21, first full sentence - underlining added).
8.3 The Board is satisfied that claim 1 of the second auxiliary request does not contain subject-matter extending beyond the content of the application as originally filed (Article 123(2) EPC).

8.4 As pointed out by the appellant, the gist of the invention, as set out in claim 1 of the second auxiliary request, consists essentially in combining the synchronization of image files to a media player with the conversion at the host computer of the image files into different display formats compatible with the media device's capabilities. In other words, before downloading each image file to the media device, it is formatted according to display formats pertaining to different pixel sizes. By performing image formatting at the host computer, display of the image files at the media device is "responsive and efficient" (see page 20, lines 1 and 2 and feature (e') of claim 1).

8.5 D6 refers to the possibility of synchronizing images to a media device from a host computer (see D6, paragraph [0053]). However, D6 is essentially concerned with the problem of automatically initiating and performing synchronization upon connection of a data link between the media player and the host computer. Furthermore, the teaching of D6 aims at achieving synchronization with a reduced amount of data transfer between the host computer and the media device (see paragraph [0008]).

8.6 D7 teaches that data to be downloaded to a mobile device is filtered or transformed by a filter module in accordance with the characteristics or capabilities of the mobile device. "Filtering of content data prior to transfer and storage in cache 28 is particularly advantageous since [sic] to the limited memory resources commonly found in mobile devices. For instance, if
mobile device 18 cannot support or render a particular form of content downloaded from content provider 12, filtering module 30 can omit this information prior to transfer to mobile device 18. In another example, mobile device 18 can have limited or no ability to display colors. Accordingly, filtering module 30 can replace or omit information related to colors, and thereby, convert the content to be displayed in a format which is more suitable for the mobile device 18, such as a gray-scale format. Typically, images displayed in color require considerably more bytes than that necessary to display the same image using a gray-scale format. By converting the image data to the gray-scale format prior to storage in cache 28, considerable storage savings can be realized" (D7, Column 11, lines 16 to 32 - underlining added).

Thus, the image rendering explicitly disclosed in D7 relates to the conversion of colour images to a grey-scale format.

8.7 The Board agrees with the appellant that neither D6 nor D7 shows a method comprising all the features recited in claim 1 according to the second auxiliary request.

Hence, in the light of the cited prior art, the subject-matter of claim 1 of the second auxiliary request satisfies the requirement of novelty (Article 54 EPC).

9. As to the question of inventive step, the Board notes that the amendments made to the main request considered in the contested decision have shifted the focus of the invention to aspects, such as the synchronization of images to a media device performed by copying a set of rendered images generated for each of the original
images, which do not appear to have been investigated during the first instance proceedings and may thus require an additional search.

10. Under these circumstances, the Board considers it appropriate to make use of its powers under Article 111(1) EPC and remit the case to the department of first instance for further prosecution.
Order

For these reasons it is decided that:

1. The decision is set aside.

2. The case is remitted to the department of first instance for further prosecution on the basis of the second auxiliary request filed at the oral proceedings.

The Registrar: The Chairman:

I. Aperribay R. Moufang

Decision electronically authenticated