

**LG Electronics, Inc., LG Electronics U.S.A., Inc., and
Vizio, Inc.**

v.

Multimedia Technologies Pte. Ltd.

IPR2024-00354
February 20, 2025

Patent Owner Demonstratives



US010419805B2

(12) **United States Patent**
Shoykher et al.

(10) **Patent No.:** **US 10,419,805 B2**
(45) **Date of Patent:** **Sep. 17, 2019**

(54) **DATA SERVICE**

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(22) Filed: **Nov. 2, 2017**

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Related U.S. Application Data

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G06F 3/00 (2006.01)
G06F 13/00 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC ... **H04N 21/4131** (2013.01); **H04N 21/43615** (2013.01); **H04N 21/4782** (2013.01); **H04N 21/4882** (2013.01)

(58) **Field of Classification Search**
CPC H04N 21/4131; H04N 21/43615; H04N 21/4782; H04N 21/4882
See application file for complete search history.

(56) **References Cited**

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(Continued)

Primary Examiner—Kyu Chae

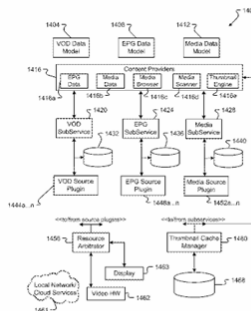
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(57)

ABSTRACT

A data service system in an Intelligent Television (TV) includes an internal content provider module configured to provide content to video hardware or display of the Intelligent TV or to a content provider module or application of the Intelligent TV and a subservice configured to provide the internet content provider module with requested data for a pre-defined data model. The internal content provider module is loaded on the Intelligent TV responsive to a user action or a schedule event on the Intelligent TV, and the internal content provider module organizes the received data from the subservice as the content according to a pre-defined format. The internal content provider module includes an EPG data provider, a media data provider, a media browser, a media scanner, and/or a thumbnail engine.

18 Claims, 22 Drawing Sheets



The '805 Patent

Claims 1, 10, and 17: “[O]rganizing...the data according to **a pre-defined format corresponding to each of the plurality of subservices**”

Claims 3 and 12: “[T]he EPG data provider is configured to serve one or more applications of the TV with **EPG information in a read-only format**”

Claims 4 and 13: “[T]he media data provider is configured to provide **media metadata personalized for a user**”

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

Every independent claim requires “organizing... the data according to a pre-defined format corresponding to each of the plurality of subservices.” Although Patent Owner has proposed a construction for “organizing... the data according to a pre-defined format corresponding to each of the plurality of subservices,” the Board need not adopt this construction for Patent Owner to prevail in this IPR. Regardless of the construction of this term, the claims unambiguously require organizing by a format *corresponding to subservices*. The prior art teaches organizing by a format *corresponding to file types*. File types are not subservices, and thus the prior art cannot suggest the claims.

Paper 28, 2

Petitioners' Reply Argument:

29. Multimedia contends that “Chen does not teach organizing MP3 files from a VOD subservice any differently from MP3 files from a media subservice and thus cannot suggest organizing data according to a pre-defined format corresponding to the types of subservices as claimed” and that “a POSITA would at most organize files received from each subservice according to a format based on the type of the file.” Resp. 32. This argument fails.

Paper 24, 24
combination of references.”). As noted above, the Petition explained that Melnychenko renders obvious a “*VOD subservice*,” an “*EPG subservice*,” and a “*media subservice*” as illustrated in exemplary Figure 9B (modified and

Paper 24, 24

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Petitioners' Petition Argument:

metadata formats. Ex.1005, [0065]. Melnychenko, however, does not provide implementation details how such metadata is formatted or how the pre-processor 958 organizes metadata with a variety of formats for storage in database 956. Ex.1003, ¶¶143-145.
Paper 1, 32

Petitioners' Petition Argument:

Accordingly, Chen renders obvious “*organizing...the data*” in a “*format corresponding to each of the plurality of subservices*” by teaching that the received metadata is organized in a metadata table corresponding to each different type of content. Ex.1003, ¶148.

Paper 1, 34

Petitioners' Petition Argument:

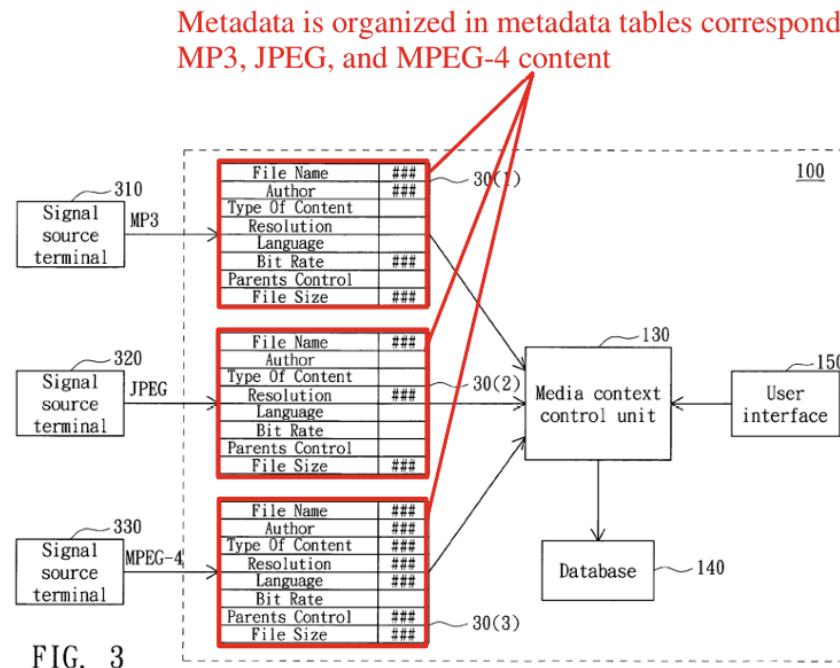


FIG. 3

Ex.1007, Fig. 3 (annotated).

Paper 1, 34

Patent Owner's Expert Dr. Surati Testified:

127. Here, Petitioner's annotations to Fig. 3 confirm that Chen organizes metadata in metadata tables corresponding to the *file format of the content* – not corresponding to *each of the plurality of subservices* as claimed. Fig. 3 as annotated unambiguously shows that Chen organizes MP3 files according to an MP3 format, JPEG files according to a JPEG format, and MPEG-4 files according to an MPEG-4 format. But MP3, JPEG, and MPEG-4 are not VOD, EPG, or media subservices. Rather, it is well known that MP3, JPEG, and MPEG-4 are file types.

Ex.2010, 58

Patent Owner's Expert Dr. Surati Testified:

128. Moreover, a POSITA would not understand organizing data according to formats *corresponding to file types* as disclosed by Chen to suggest organizing data according to formats *corresponding to subservices* as claimed. I agree with Dr. Lippman's deposition testimony that each subservice (VOD, EPG, or media) may provide data in multiple file types. Ex. 2012. Thus, a VOD subservice may provide data in the MP3, JPEG, or MPEG-4 format, but a media subservice may also provide data in the MP3, JPEG, or MPEG-4 format. *Id.* Indeed, Chen itself discloses three different examples of the media subservice that provides media in the MP3, JPEG, and MPEG-4 file types. Chen states that signal sources 310, 320, and 330 are

Ex.2010, 59

Patent Owner's Expert Dr. Surati Testified:

subservices as claimed. When Chen applies its metadata table based on MP3, JPEG, or MPEG-4 content, it does so regardless of the type of subservice (that is, MP3 files are organized according to the MP3 format regardless of whether the source is VOD, EPG, or media; JPEG files are organized according to the JPEG format regardless of whether the source is VOD, EPG, or media; and MPEG-4 files are organized according to the MPEG-4 format regardless of whether the source is VOD, EPG, or media). Chen simply does not state that it organizes MP3 files from a VOD

Ex.2010, 59-60

Patent Owner's Expert Dr. Surati Testified:

media). Chen simply does not state that it organizes MP3 files from a VOD subservice any differently from MP3 files from a media subservice, as would be required by claim 1.

129. For that reason, even if Chen's teachings are applied to Melnychenko, a POSITA would at most organize files received from each subservice according to a format based on the type of the file. Chen contains no suggestion to organize data from each subservice according to a format based on the type of the subservice.

Ex.2010, 60

“A Pre-defined Format Corresponding to Each of the Plurality of Subservices”

Moreover, pages 31-32 of Patent Owner’s Response squarely addresses why Chen combined with Melnychenko does not suggest organizing by subservices. Patent Owner has not argued Chen separately as the Reply at 24 alleges. Rather, the Reply entirely ignores Patent Owner’s arguments directed to the combination of Chen and Melnychenko. As explained on pages 31-32, the prior art combination does not support Petitioners’ inference. Even when combined with Melnychenko, Chen does not suggest organizing according to subservices because a “single subservice type may provide data of multiple file types” and “a single file type may be used by multiple subservices.” POR, 31-32. When a single subservice has

Paper 28, 4

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

may be used by multiple subservices.” POR, 31-32. When a single subservice has multiple file types and a single file type is shared between multiple subservices, there is no correlation or correspondence between file types and subservices. *Id.* Thus, “even if Chen’s teachings are applied to Melnychenko, a POSITA would at most organize files received from each subservice according to a format based on the type of the file.” *Id.* Neither the Petition nor Dr. Lippman’s original declaration

Paper 28, 4

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

Attempting to salvage their invalidity theory, Petitioners introduce Dr. Lippman's Reply Declaration to argue that "Chen's teachings represent a general technological principle" and should "not limited to the exemplary content of MP3, JPEG, and MPEG-4." Reply, 25. But the Reply Declaration fails to address Chen's teachings and Dr. Lippman's own deposition testimony and is not persuasive. Chen

Paper 28, 5

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

teachings and Dr. Lippman's own deposition testimony and is not persuasive. Chen explicitly teaches multiple signal sources 310-330 each providing media of a different file type MP3, JPEG, or MPEG-4, as shown in Fig. 3. Thus, Chen teaches the same type of subservice (media) providing data in three different file types. POR, 29-31. And Dr. Lippman conceded in deposition that multiple file types may be used by a single subservice. Ex. 2012, 34:14-36:10 ("I suppose you could consider an MP3 to be video on demand...Video content can be represented or formatted as MPEG-1, MPEG-2, MPEG-4. Well, yeah."). Even if Chen is not

Paper 28, 5

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

formatted as MPEG-1, MPEG-2, MPEG-4. Well, yeah.”). Even if Chen is not limited to “MP3, JPEG, and MPEG-4,” Dr. Lippman’s Reply Declaration suffers from the same defect as Petitioners’ assertions addressed above by failing to explain why a POSITA would modify Chen’s teaching of organizing by file type format to organize by subservice format, when these disclosures are unrelated and there is no rationale to do so. Dr. Lippman asserts that Chen itself teaches multiple

Paper 28, 5

"A Pre-defined Format Corresponding to Each of the Plurality of Subservices"

format corresponding to subservices. If Chen teaches multiple subservices but does not teach organizing according to a format corresponding to subservices, that is evidence that organizing by a format corresponding to subservices is not obvious in view of the prior art combination. Dr. Lippman (and Petitioners) fail throughout to explain why a POSITA would make the required modification when it is neither taught nor suggested by the prior art and have thus not shown that the modification is obvious in view of the prior art combination.

Paper 28, 6

Construction of “Pre-defined Format”

Patent Owner’s construction of “pre-defined format” provides an additional reason why the claims are distinguishable over the prior art. As stated in the Patent Owner Response, “organizing...the data according to a pre-defined format *corresponding to **each of the plurality of subservices***” refers to organizing data according to (1) a pre-defined format corresponding to a VOD subservice, (2) a pre-defined format corresponding to an EPG subservice, and (3) a pre-defined format corresponding to a media subservice. POR, 19-21. The claims explicitly state that “the plurality of subservices comprises a video-on-demand (VOD) subservice, electronic programming guide (EPG) subservice, and a media subservice.” Thus, “organizing...the data according to a pre-defined format

Construction of “Pre-defined Format”

The specification provides multiple examples where data from the VOD subservice, EPG subservice, or media subservice are organized according to a pre-defined format corresponding to the specific subservice source. For example, the

Similar to as discussed with respect to the EPG source plugins 1448a-n, VOD source plugins 1444a-n and media source plugins 1452a-n may need to translate the various different media format and information received into a consistent model. In one implementation, *information related to the VOD or media received from a corresponding VOD source plugin or media source plugin can be translated according to the respective VOD data model 1404 or media data model 1412* and stored into the respective storage 1432 or storage 1440.

Ex. 1001, 30:32-41 (emphasis added).
Paper 19, 20-21

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Construction of “Media Metadata Personalized for a User”

“Media metadata personalized for a user” as it appears in claims 4 and 13 should be construed as “the content of the metadata is personalized for a user.” Ex. 2010, ¶54. Patent Owner seeks this construction because Petitioner appears to argue that selecting media metadata for a user, where the content of that metadata does not change, is personalized for a user.

Paper 19, 14

"EPG information in a Read-Only Format"

Here, the Petition baldly asserts—without identifying any supporting disclosure—that Kim’s EPG information is in a read-only format. POR, 42-44. The only “evidence” provided by the Petition is Dr. Lippman’s conclusory testimony that EPG “is served in a read-only format because its purpose is to provide information to the user about the broadcast program currently displayed and therefore may not be edited.” Ex. 1003, ¶281. Not only should Dr. Lippman’s opinion be entitled to no weight for failing to cite any underlying facts (*see Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 (PTAB Feb. 10, 2023) (*precedential*)), but it is also wrong. The Patent Owner Response showed that it was well known at the time of invention that EPG could be edited, and it was desirable to do so. POR, 43-44.

Paper 28, 10

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

“EPG information in a Read-Only Format”

Addressing the “state of the art” evidence cited by Dr. Surati, the Reply argues that that evidence discloses “the display of information in the EPG may be edited, not that the underlying EPG information is edited.” Reply, 29. This argument is based on a misreading of the reference. The reference does teach presenting program content in an EPG-like interface. Ex. 2013, 33:39-45; Ex. 1021, 175:23-177:12. But immediately preceding the teaching of the EPG-like interface is another teaching to populate a personalized EPG using recommended or user-selected content. Ex. 2013, 33:33-39. This disclosure confirms that it was known to personalize (thus, edit) EPG. Ex. 1021, 179:9-180:9.

Paper 28, 11