

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC.,

Petitioner

U.S. Patent No. 10,419,805

**SECOND DECLARATION OF ANDREW LIPPMAN, PH.D.,
UNDER 37 C.F.R. § 1.68 IN SUPPORT OF PETITIONER'S REPLY**

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I, Andrew Lippman, do hereby declare as follows:

I. INTRODUCTION

1. I previously submitted a Declaration (Ex.1003) in this proceeding (IPR2024-00354) that set forth my opinions regarding claims 1-18 (the “Challenged Claims”) of U.S. Patent No. 10,419,805 (“the ’805 patent”) (Ex.1001).

2. I submit this Second Declaration in reply to Patent Owner’s Response (Paper 19) in this proceeding.

3. I preparing this Second Declaration, I have considered:

- a. Institution Decision (“Inst. Dec.,” Paper 9);
- b. Patent Owner Response (“Resp.,” Paper 19);
- c. Declaration of Dr. Rajeev Surati (Ex.2010);
- d. Deposition Transcript of Dr. Rajeev Surati (Ex.1021);
- e. U.S. Patent Publication No. 2013/0263184A1 to Melnychenko et al. (“Melnychenko”) (Ex.1005);
- f. U.S. Patent Publication No. 2012/0054794A1 to Kim et al. (“Kim”) (Ex.1006);
- g. U.S. Patent Publication No. 2007/0226268A1 to Chen (“Chen”) (Ex.1007);
- h. U.S. Patent Publication No. 2006/0212902A1 to Seo et al. (“Seo”)

(Ex.1023);

i. U.S. Patent Publication No. 2009/0083811A1 to Dolce et al.

(“Dolce”) (Ex.1024);

j. U.S. Patent No. 8,776,101 to Donoghue et al. (“Donoghue”)

(Ex.2013); and

k. Any other document referenced herein.

4. My qualifications can be found in my first Declaration, Ex.1003 and in my CV, Ex. 1004. The discussion of the level of ordinary skill in the art and relevant legal standards are also the same as my first Declaration. In forming the opinions expressed below, I have considered the documents list above (and any additional documents discussed below) along with my own knowledge and experience.

5. All emphasis in quoted material below has been added by me, unless indicated otherwise. Claim language is *italicized*.

II. CLAIM CONSTRUCTION

A. “*Pre-defined format*” and “*uniform format*” (all Challenged Claims)

6. I understand that the Board in the Institution Decision considered the scope and meaning of “*pre-defined format*” and “*uniform format*.” Inst. Dec., 16-17, 28-29.

7. As I explain below, a POSITA would have understood the term “pre-defined format” in the Challenged Claims, consistent with the ’805 patent specification, as referring to the order of data or metadata in a pre-defined format.

8. Limitation [1.2.1] recites “*organizing...the data according to a **pre-defined format** corresponding to each of the plurality of subservices.*” Limitation [1.2.2] recites that “*the **pre-defined format** comprises one of a VOD data model, an EPG data model and a media data model.*” Limitation [1.2.4] recites “*each of the VOD data model, EPG data model, and media data model provide a **uniform format** for the plurality of subservices.*”

9. The ’805 patent specification uses the term “pre-defined format” in the following passages:

EPG information embedded with content feeds may contain limited information that are ***ordered in a pre-defined format*** (i.e., the ***order*** of other relevant information such as title, time, description, and/or other information about the programming).

Ex.1001, 30:1-5.

Process 1600 next organizes the requested media and /or data according to a ***pre-defined*** format as content 1630...The content provider modules will need to process the received media and/or data...and organize such media and/or data into a ***pre-defined format*** for use by the relevant applications 416.

Ex.1001, 34:49-60.

10. In view of the above-cited portions of the '805 patent specification (Ex.1001, 30:1-5, 34:49-60), a POSITA would have understood that the scope and meaning of the term “*pre-defined format*,” as used in the claim and the '805 patent specification, refers to the order of data or metadata in a pre-defined format. As described above, the '805 patent specification provides that the information in the data (e.g., EPG metadata) “such as title, time, description, and/or other information about the programming” is ordered in a pre-defined format in the content feed so that the information can be processed at the device receiving the content feed. Ex.1001, 30:1-5; *see also id.*, 30:8-15 (describing source plugins as organizing the information received from the content feed), 28:56-60 (source plugins gather data from external sources). I have reviewed the '805 patent specification. The specification does not impose any requirements on the ordering that requires narrowing the claim scope.

11. I note that the term “*pre-defined format*” also appears in the “Summary” section of the specification (Ex.1001, 2:29-30, 2:53-58, 2:66-3:4). These portions of the '805 patent specification, however, largely mirror the claim language and do not provide guidance on the meaning of this term.

12. The '805 patent specification uses the term “uniform format[.]” only once.

The data models provide **uniform formats** for the respective

subservices (i.e., VOD subservice 1420, EPG subservice 1424, and media subservice 1428) and/or the internal content provider modules 1416 which interface with applications 416.

Ex.1001, 33:25-30.

13. The term “uniform format” appears nowhere else in the ’805 patent specification other than the claims. As is evident in Ex.1001, 33:25-30 above, the ’805 patent does not appear to ascribe any specific meaning to the term “uniform format” and the passage does not limit the scope of this term to require a plurality of uniform formats. As such, a POSITA would ascribe to the claim term its ordinary and customary meaning. For example, consistent with my first Declaration, the prior art expressly teaches a ‘uniform format,’ which is within the scope of the ’805 patent’s claims. See Ex.1003, ¶¶179-180 (showing how Chen teaches a “uniform format”).

14. I disagree with the construction of “*pre-defined format*” and “*uniform format*” proposed by Multimedia and Dr. Surati. Multimedia and Dr. Surati assert that “*pre-defined format*” “refers to the format of the VOD data model, EPG data model, and media data model having a format that is defined prior to the organizing step (i.e., ‘pre-defined’ prior to the organizing step)” and that the claim requires “**at least three ‘pre-defined formats.’**” Resp., 20; *see also* Ex.2010, ¶68. As I explain below, I disagree that the term “*pre-defined format*” in limitation [1.2.1] requires “at least three ‘pre-defined formats,’” as argued by Multimedia and

Dr. Surati. I also disagree with Multimedia and Dr. Surati's assertion that "*a uniform format*" in limitation [1.2.4] requires three uniform formats: (a) a uniform format for the EPG subservice, (b) a uniform format for the VOD subservice, and (c) a uniform format for the media subservice. Resp., 21-22; Ex.2010, ¶70.

15. Multimedia and Dr. Surati cite the following three passages (1) Ex.1001, 34:49-54, (2) Ex.1001, 29:63-67, and (3) Ex.1001, 30:32-41 for alleged support of their proposed construction of "*pre-defined format*." Resp., 20-21; Ex.2010, ¶69.

Process 1600 next organizes the requested media and/or data according to a pre-defined format as content 1630. As discussed with respect to process 1500, in step 1540, the content provider modules 1416 process the received media and/or data from the corresponding subservices 1420, 1424, and 1428.

Ex.1001, 34:49-54.

An exemplary EPG source plugin receives and processes EPG information from a designated EPG information source. The EPG source plugin is configured to process the received EPG information according to the specific format of the corresponding designated EPG information source.

Ex.1001, 29:63-67.

Similar to as discussed with respect to the EPG source plugins 1448 a-n, VOD source plugins 1444 a-n and media source plugins 1452 a-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.

16. Above, I cited Ex.1001, 34:49-60, which includes passage (1) cited by Multimedia and Dr. Surati. However, passages (2) and (3) cited by Multimedia and Dr. Surati (Ex.1001, 29:63-67, Ex.1001, 30:32-41) do not use the term “pre-defined format” or provide guidance on what this term means. The term “specific format” is used in passage (2), but the ’805 patent specification does not define or suggest that a “specific format” is a “pre-defined format.” The ’805 patent specification does not define what the term “pre-defined format” means. Passage (3) describes different data models (VOD data model and media data model), but there is no discussion of any “pre-defined format” for any of the different data models or media formats.

17. I also disagree that the term “*pre-defined format*” in limitations [1.2.1] and [1.2.2] requires “three pre-defined formats,” as alleged by Multimedia and Dr. Surati. Resp., 20; Ex.2010, ¶68. A POSITA would not understand the claim as requiring three pre-defined formats or three uniform formats. Limitation [1.2.1] recites “*a pre-defined format*,” and limitation [1.2.2] recites “*the pre-defined*

format.” Thus, limitations [1.2.1] and [1.2.2] recite “*pre-defined format*” in singular form, not as requiring “three pre-defined formats,” as incorrectly argued by Multimedia and Dr. Surati. Resp., 20; Ex.2010, ¶68. Similarly, Multimedia and Dr. Surati argue that limitation [1.2.4] requires three uniform formats, even though limitation [1.2.4] recites “*a uniform format*” in singular form. Resp., 21-22; Ex.2010, ¶70. Multimedia and Dr. Surati are incorrectly interpreting the limitations “pre-defined format” and “uniform format” to require multiple “pre-defined format[s]” and multiple “uniform format[s],” despite the fact that limitations [1.2.1], [1.2.2] and [1.2.4] do not require multiple instances of these limitations. On the contrary, both claim limitations are presented in singular form (“*a pre-defined format*” and “*a uniform format*”). Nothing in the ’805 patent specification or surrounding claim language requires reading limitations from a described preferred embodiment that may include multiple pre-defined formats or multiple uniform formats. Therefore, a POSITA would understand that the claim scope encompasses one or more pre-defined format and one or more uniform format.

B. “*Media metadata personalized for a user*” (claims 4 and 13)

18. Limitation [4.0] recites that “*the media data provider is configured to provide media metadata personalized for a user.*” Limitation [13.0] has the same feature.

19. As I explain below, the term “*media metadata personalized for a*

user” should be construed according to its plain and ordinary meaning as “media metadata that has been personalized for a user.” This term should not be construed to require limitations from the specification that are not recited in the claim.

20. Multimedia argues that “*media metadata personalized for a user*” requires a construction that “the content of the metadata is personalized for a user.” Resp., 14; Ex.2010, ¶54. This construction is wrong at least because limitation [4.0] does not recite “*the content* of the metadata [being] personalized for a user.” Dr. Surati explained during his deposition that limitation [4.0] does not require “the content” or “*the content* of the same metadata [being] personalized” for a user. Ex.1021, 125:126:2 (reproduced below). I agree with Dr. Surati.

16	Q. Okay. So if we are going with your first
17	sentence in paragraph 54 which adds the word "content,"
18	where do you see the word "content" in claim 4?
19	A. There is no word "content" in claim 4.
20	Q. Okay. So if we are going with your second
21	sentence in paragraph 54, which says the metadata
22	content of the same media is personalized, i.e.
23	different for each user, where do you see that in claim
24	4?
25	A. Don't see it.

Ex.1021, 125:16-126:2.

21. Multimedia and Dr. Surati argue that their construction is correct because if “the content of [the] metadata does not change” or “the metadata content

is still the same between two users,” then it is not personalized for the user. Resp., 14; *see also* Ex.2010, ¶56. Dr. Surati claimed that for metadata to be “*personalized*,” the metadata must be edited. Ex.1021, 178:12-18 (reproduced below). I disagree with Dr. Surati.

12	Q.	I just want to know, are you saying that the
13	metadata	has to be edited in order to be personalized?
14	A.	I am.
15	Q.	Okay. So you are saying that in order to be
16	personalized	there has to be a specific requirement that
17	the metadata	is edited?
18	A.	Yeah.

Ex.1021, 178:12-18. There is **no embodiment** in the '805 patent that suggests or even hints at the idea that metadata for two different users must be **changed** or **edited** to be different and therefore “*personalized*” for a user.

22. Multimedia and Dr. Surati cite the following two passages (Ex.1001, 31:26-41 and 34:61-35:8) in support of their proposed construction. Resp., 14-15; Ex.2010, ¶55.

In another example, media data provider 1416 b is configured to provide personalized media metadata and stores the personalized media metadata into a database for further access. In one implementation, the personalized media metadata is stored in a sqlite database. The user may set up a personalized profile or preference for types, genres, or other preferred characteristics of media. The user may access and set

up the profiles in a corresponding application. Alternatively, Intelligent TV 100 may contain pre-defined profiles and/or may automatically build a profile for a user by analyzing the user's past viewing preferences progressively. Media data provider 1416 b may work with media subservice 1428, VOD sub service 1420, and/or other subservices. For example, media data provider 1416 b uses the metadata regarding media collected by media subservice 1428 in order to generate the personalized media metadata.

Ex.1001, 31:26-41.

For example, EPG data provider 1416 a serves applications with EPG information in a read-only format. As such, EPG data provider 1416 a may transmit EPG information received from EPG subservice 1424 in EPG data model 1408 without modification. In another example, media data provider 1416 b provides personalized media metadata and stores data in a sqlite database. As such, media data provider 1416 b may receive media and information from VOD subservice 1420, EGP subservice 1424, and media subservice 1428. Media data provider 1416 b will also organize the media and data received from these subservices to generate the personalized media metadata and further stores the generated metadata into the sqlite database. The relevant application may simply access the database for the personalized media metadata.

Ex.1001, 34:61-35:8.

23. The above-cited passages (Ex.1001, 31:26-41 and 34:61-35:8) indicate that personalized media metadata may be generated, but limitation [4.0] does not recite “generating” personalized media metadata for a user.

24. In addition, the '805 patent discloses an embodiment where personalized metadata is merely stored, without any discussion of being “generated,” as described in Column 33, lines 61-67 reproduced below.

Further, in one implementation, the subservices may need to allow access to storages 1432, 1436, and 1440 to media data provider 1416 b in order to allow media data provider 1416 b to **store and access the personalized media metadata**. In other implementations, media data provider 1416 b may **store the personalized media metadata in a dedicated database**.

Ex.1001, 33:61-67. Multimedia and Dr. Surati did not cite or reference this embodiment of the '850 patent specification that does not require “personalized media metadata” to be “generated” for a user. Therefore, Multimedia and Dr. Surati are excluding embodiments of the '850 patent specification to support their incorrect construction.

C. “*Media sources of the TV*” (claims 6 and 14)

25. Limitation [6.0] recites that “*the media browser is configured to provide a real-time view of **media sources of the TV** and maintain a list of connected **media sources of the TV**.*” Limitation [14.0] has the same feature.

26. The term “*media sources of the TV*” in limitation [6.0] should be construed according to its plain and ordinary meaning as including any media source that may be connected to the TV. Claim 6 does not recite any specific type

of “*media sources of the TV*.”

27. Multimedia and Dr. Surati propose to construe “*media sources of the TV*” as requiring the VOD subservice, EPG subservice, and media subservice as recited in claim 1. Multimedia and Dr. Surati’s proposed construction is incorrect for the following reasons.

28. **First**, claim 6 does not recite that the “*media sources of the TV*” must include the VOD subservice, EPG subservice, and media subservice as recited in claim 1. Dr. Surati admitted this in his deposition (Ex.1021, 159:16-23, 167:12-17) (reproduced below), a position I agree with. Multimedia and Dr. Surati’s proposed construction improperly imports unrequired limitations. As I noted above, claim 6 does not recite any specific type of “*media sources of the TV*.”

16	Q. Okay. And that is in paragraph 60 of your
17	declaration?
18	A. I think that's correct.
19	Q. Do you see that that characterization about
20	media sources of the TV must at least comprise a VOD
21	subservice source, an EPG subservice source, and a media
22	subservice source <u>anywhere in claim 6?</u>
23	A. <u>I don't. It is not explicit.</u>

Ex.1021, 159:16-23.

12	Q. And can you identify the specific language in
13	claim 6 that requires media sources of the TV to have to
14	comprise -- must comprise VOD subservice source, an EPG
15	subservice source, and a media subservice source?
16	A. There is nothing specific in there, explicit
17	saying that.

Ex.1021, 167:12-17.

29. Second, the term “*media sources of the TV*” is not preceded by the article “the” to refer back to any “media sources of the TV” recited in claim 1. Therefore, the term “*media sources of the TV*” in claim 6 has no antecedent basis and does not further define any “subservice” in claim 1, even if a “subservice” is considered to be a “media source.” Multimedia and Dr. Surati cite Ex.1001, 28:46-55, 31:42-50, and 29:3-23 to support their argument that the “subservices” recited in claim 1 may be “media sources.” Resp., 17-19; Ex.2010, ¶¶61-64. However, none of these cited portions suggests that “media sources” must include a VOD subservice, an EPG subservice, and a media subservice, as Multimedia and Dr. Surati propose. The specification does not define a “media source” as requiring a VOD subservice, an EPG subservice, and a media subservice. The specification does not define a “media source.”

30. Third, Multimedia and Dr. Surati’s proposed construction is incorrect because it excludes embodiments of the specification. As shown in Fig. 1B below,

the '805 patent specification explains that “media sources” that may be connected to an intelligent TV 100 include external hardware devices 168 such as a DVD player 168a, BluRay player 168b, portable media devices 168c, smart phones 168d, tablet devices 168e, personal computer 168f, external cable boxes 168g, etc. Ex.1001, 13:3-18 (describing external hardware devices 168 in Fig. 1B connected to Intelligent TV 100 via a wired 108 connection or wireless connection 112) (reproduced below), 30:16-31 (describing external hardware devices 168 such as a DVD or BluRay player that may be connected to the Intelligent TV) (reproduced below). I note that Dr. Surati did not cite in his declaration these portions of the specification that describe external hardware devices as “media sources.”

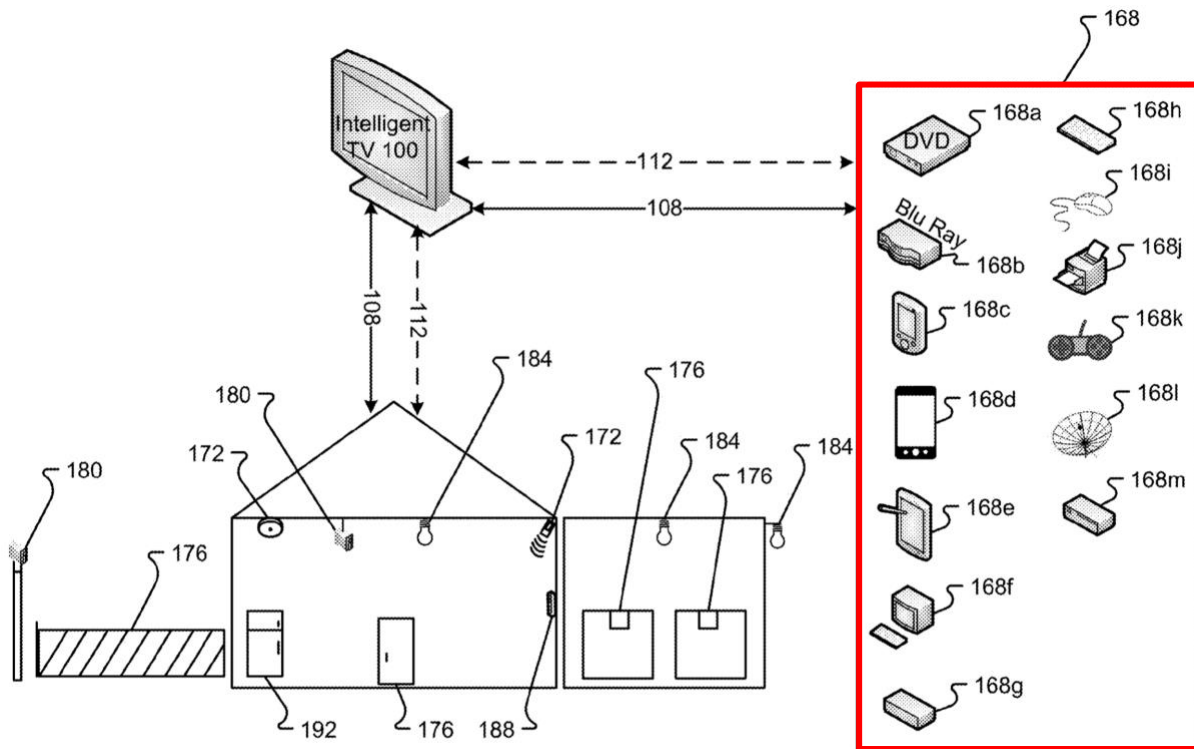


Fig. 1B

Ex.1001, Fig. 1B (annotated)

Further, as shown in FIG. 1B, the Intelligent TV 100 can interact with other electronic devices 168 by either the wired 108 and/or wireless 112 connections. As described herein, components of the Intelligent TV 100 allow the device 100 to be connected to devices 168 including, but not limited to, DVD players 168 a, BluRay players 168 b, portable digital media devices 168 c, smart phones 168 d, tablet devices 168 e, personal computers 168 f, external cable boxes 168 g, keyboards 168 h, pointing devices 168 i, printers 168 j, game controllers and/or game pads 168 k, satellite dishes 168l, external display devices 168 m, and other universal serial bus (USB), local area network (LAN), Bluetooth™, or high-definition multimedia interface (HDMI) compliant devices,

and/or wireless devices. When connected to an external cable box 168 g or satellite dish 1681, the Intelligent TV 100 can access additional media content.

Ex.1001, 13:3-18.

Media source plugins 1452 a-n are configured to interface or communicate with the various media sources available to Intelligent TV 100. For example, media sources may include media content in connected devices 168 or other devices or media contents that are accessible to Intelligent TV 100 (i.e., via network 132). Each media source may contain content in a specific format (i.e., DVD, BluRay, and other digital or analog formats). Further, media from live feeds (i.e., from over-the-air broadcast, cable or satellite feeds, Internet feeds) are content in a live format specific to the type of feed. Further, media content and feeds from the various sources may also include metadata information embedded with these contents (i.e., close captions, subtitles, and other information). In one implementation, media source plugins 1452 a-n are configured to receive media contents and information for one or more of these media sources in a specific format.

Ex.1001, 30:16-31.

31. Therefore, Multimedia and Dr. Surati’s proposed construction that “*media sources of the TV*” must include the VOD subservice, EPG subservice, and media subservice in claim 1 is improper because it imports unrecited limitations, is not required by the specification, and excludes embodiments of the specification. The term “*media sources of the TV*” should be construed according to its plain and

ordinary meaning as including any media source that may be connected to the TV.

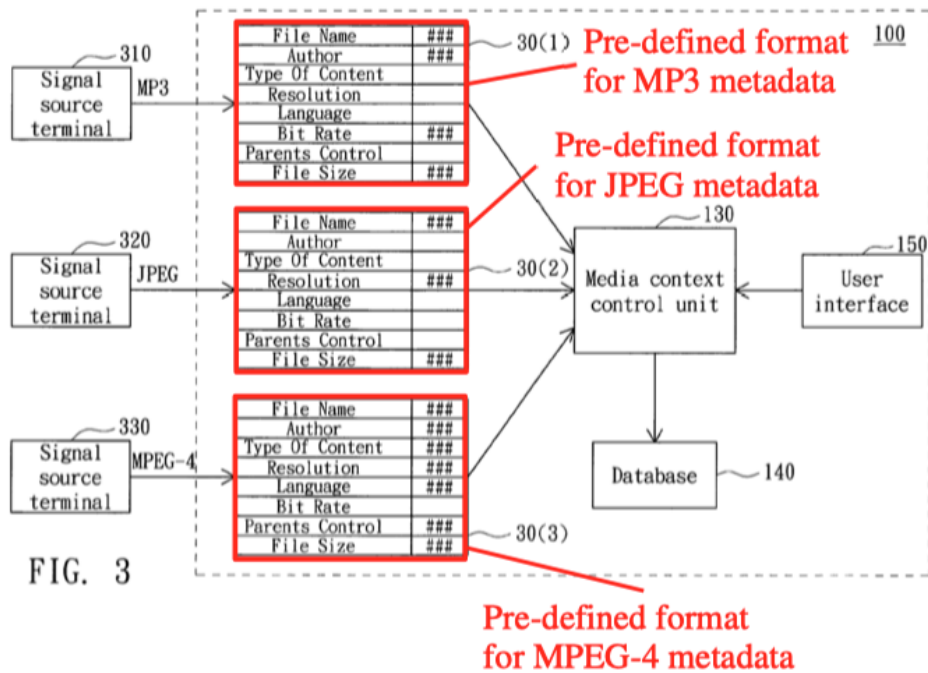
III. OBVIOUSNESS OF CHALLENGED CLAIMS

32. In my first Declaration, I showed why the Challenged Claims are obvious. Below, I address new arguments raised by Multimedia and Dr. Surati.

A. The prior art renders obvious “organizing...the data according to a pre-defined format corresponding to each of the plurality of subservices” (limitation [1.2.1]) (Ground 1).

33. In my first Declaration, I showed why limitation [1.2.1] is obvious over Melnychenko and Chen. Ex.1003, ¶¶141-157. I understand that Multimedia and Dr. Surati have made arguments opposing the obviousness of limitation [1.2.1], particularly with regard to Chen.

34. In my first Declaration, I showed how Chen’s metadata tables 30(1), 30(2), and 30(3) each have their own “pre-defined format,” as illustrated in Figure 3 below.



Ex.1007, Fig. 3 (annotated).

Ex.1003, ¶¶ 74, 147

35. In the context of Figure 3 above, Chen discloses that metadata data is organized in three metadata tables 30(1), 30(2) and 30(3), each of which have a specific order for the same fields (e.g., File Name, Author, Type of Content, Resolution, etc.). Ex.1007, [0020]. Chen's Figure 3 illustrates this concept where metadata from different sources is organized into metadata tables (e.g., MP3 metadata table 30(1), JPEG metadata table 30(2), and MPEG-4 metadata table 30(3)). In Figure 3, MP3 metadata table 30(1), JPEG metadata table 30(2), and MPEG-4 metadata table 30(3) are illustrated to be organized in a "pre-defined format," because the relevant fields in the columns are organized in the following

order: (1) File Name; (2) Author; (3) Type of Content; (4) Resolution; (5) Language; (6) Bit Rate; (7) Parents Control; and (8) File size. Ex.1007, [0019] (“The set top box has several importers to receive corresponding media data from which corresponding metadata are accessed. The importers use the metadata to generate a metadata table complying with a specific table.”), [0020] (reproduced below), Fig. 3; Ex.1003, ¶148. Thus, the order of the metadata is “*pre-defined*” in each of the metadata tables 30(1)-30(3). Ex.1007, [0020] (describing the metadata tables 30(1)-30(3) each having a specific order indicated by the order of the columns of data shown in Figure 3).

Referring to FIG. 3, the relationship among media data, metadata tables and a database according to the preferred embodiment of the invention is shown. Examples of signal source terminals 310, 320 and 330 include a USB storage unit, a personal computer and a cabled TV respectively outputting an audio data such as MP3 file, an image data such as JPEG file and a video data such as MPEG-4 file to the set top box 100. Importers (not illustrated) are used by the set top box 100 to respectively **generate three metadata tables 30(1), 30(2) and 30(3) complying with a specific table. The specific table (not illustrated) is the table before the context of metadata is inputted to the columns of the metadata tables 30(1), 30(2) and 30(2). The metadata tables 30(1), 30(2) and 30(2) include columns such as file name, author, file size and so on. The columns correspond to the columns of the metadata of the MP3 file, JPEG file and MPEG-4**

file. However, the metadata tables 30(1), 30(2) and 30(3) still include partial columns. Examples of partial columns include the bit rate column corresponding to the metadata of MP3 file only, the parent control column corresponding to the metadata of MPEG-4 file only, and the resolution column corresponding to the metadata of JPEG file. In the metadata table 30(1), only the metadata columns corresponding to MP3 file are inputted with data. In the metadata table 30(2), only the metadata columns corresponding to JPEG file are inputted with data. In the metadata table 30(3), only the metadata columns corresponding to MPEG-4 file are inputted with data. **The metadata tables 30(1), 30(2) and 30(3) are illustrated in FIG. 3. The symbol ### in FIG. 3 denotes that the table is inputted with data.** The set top box 100 stores the media data of the MP3 file, the JPEG file and the MPEG-4 file in the database 140 according to the context of the metadata tables 30(1), 30(2) and 30(3). The user can promptly and correctly retrieve the media data stored in the database via the user interface 150.

Ex.1007, [0020].

36. Accordingly, as shown in Figure 3 above, although metadata tables 30(1), 30(2), and 30(3) may include different metadata (as indicated by symbol “###”) (Ex.1007, [0020]), the metadata that is present in each table is ordered in the pre-defined format corresponding to the order of the relevant fields: (1) File Name; (2) Author; (3) Type of Content; (4) Resolution; (5) Language; (6) Bit Rate; (7) Parents Control; and (8) File size. Ex.1007, [0019]-[0020].

37. As I noted above, Multimedia and Dr. Surati incorrectly construe “a

pre-defined format” to mean “*three pre-defined formats.*” Resp. 20; Ex.2010, ¶68.

Even under this incorrect construction, the combination of Melnychenko and Chen renders this obvious. As I explained in my first Declaration, Melnychenko teaches the claimed EPG subservice, VOD subservice, and media subservice. Ex.1003, ¶¶134-138. Further, as I explained in my first Declaration, it would have been obvious to organize the EPG subservice, VOD subservice, and media subservice, as taught by Melnychenko, according to pre-defined formats. Specifically, the metadata in each of the tables for EPG, VOD, and media subservices would be organized in a “*pre-defined format,*” because they include different metadata as indicated by symbol “####,” as taught by Chen. Ex.1007, [0020]; Ex.1003, ¶¶149-150.

38. Multimedia and Dr. Surati also argue that Chen “is only organizing data according to file types.” Resp., 31; see also Ex.2010, ¶¶125, 127-128. This argument is inaccurate on the technology. Resp., 31. As I explained in my first Declaration, “[a] POSITA would have understood that **Chen’s teachings represent a general technological principle** and are not limited to the exemplary content of MP3, JPEG, and MPEG-4.” Ex.1003, ¶151; Ex.1007, [0009] (generally applying the teachings to “plural types of media data.”), [0011] (explaining that the detailed description includes preferred but “non-limiting embodiments”), [0019] (“The types of media operable to the set top box of the invention is not limited.”),

[0022] (“While the invention has been described by way of example...the invention is not limited thereto.”). Chen provides example sources including “a video on demand (VoD)” and “a digital TV program, or a cabled TV program.” Ex.1007, claim 6 (“wherein the first media data or the second media data is...a VoD program...or a cabled TV program.”); *see also* Ex.1007, [0018]-[0019], [0022] (explaining that the set-top box receives a VOD program transmitted over the Internet). As is known in the art, these services provide data streams and not files, as Multimedia incorrectly asserts. *See, e.g.*, Ex.1006 (Kim), [0063] (image display apparatus (set-top box) uses real-time stream protocol (RTSP) for streaming content), [0142] (EPG received as “input stream signal” including “broadcasting information specifying the start time, end time, etc. of scheduled broadcast TV or radio programs”); Ex.1023 (Seo), [0017]-[0018], [0026]-[0027], Fig. 16C (describing EPG as streamed content); Ex.1024 (Dolce), [0068]-[0069] (describing VOD content as streamed content); Ex.1005 (Melnychenko), [0032], [0037] (describing Internet media content as streamed content).

B. The prior art renders obvious claims 3 and 12 (Ground 2)

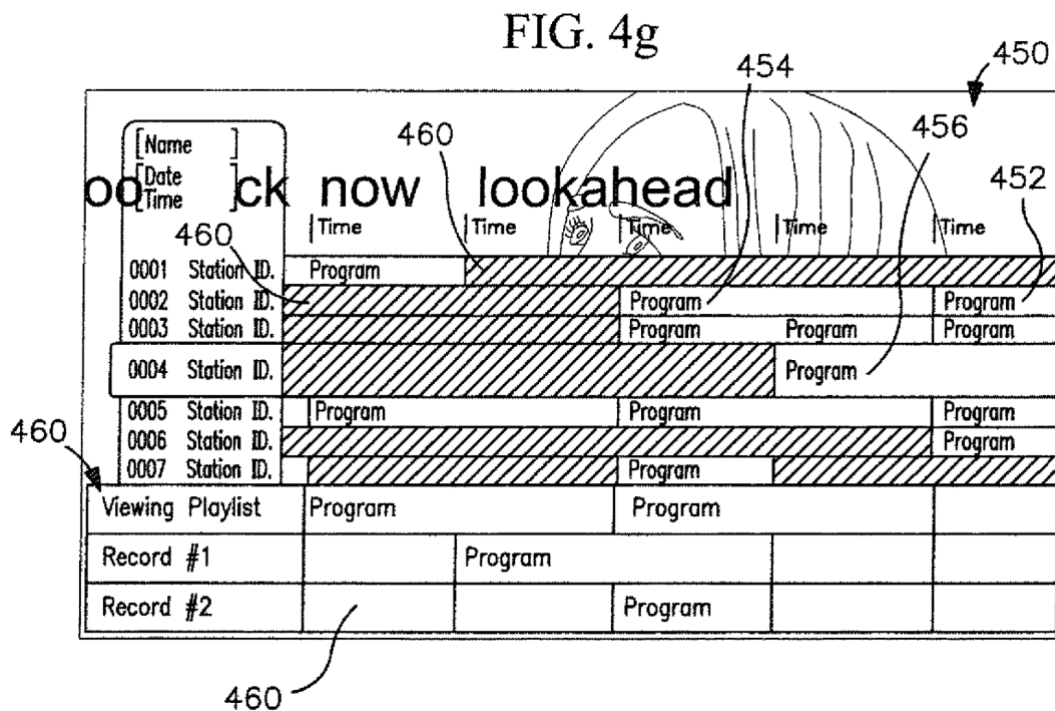
39. As shown in my first Declaration, Melnychenko, Chen, Kim and Lee-1 render obvious “*serv[ing] one or more applications of the TV with EPG information in a read-only format,*” as recited in claims 3 and 12. Ex.1003, ¶¶279-282.

40. As explained in my first Declaration, Kim teaches that metadata for EPG information “may include a channel number (DTV7-1), a channel name (YBC HD), the title of a broadcast program (‘Oh! Lady’), and an airtime (8:00-8:50 PM) for the broadcast program.” Ex.1003, ¶281 (quoting Ex.1006, [0199]). I explained in my original Declaration that a POSITA would understand that the above-identified information “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 (citing Ex.1006, [0199], [0142]).

41. Multimedia and Dr. Surati appear to be suggesting that Kim must provide that *all* EPG information may not be edited. Resp., 43; Ex.2010, ¶¶159-160. However, claims 3 and 12 do not require that *all* EPG information must be read-only. It would be obvious to serve certain types of EPG information, such as the channel number, channel name, broadcast program title, and airtime disclosed in Kim (Ex.1006, [0199]), in a read-only format because that EPG information (e.g., channel number such as 7, 9, 10, etc. or channel name such as ABC, CBS, ESPN, FOX, etc.) is designated by the broadcast provider as static information that should not be editable.

42. Multimedia and Dr. Surati refer to Donoghue (Ex.2013) as “evidence of the state of the art” that EPG metadata is edited. Resp., 43-44; see also Ex.2010, ¶161. As shown in Fig. 4g below, Donoghue discloses displaying “a personalized

[electronic programming guide] EPG 450” that “can be populated only by recommended content” based on the user’s profile. Ex.2013, 33:33-45. For example, darker or lighter shaded areas 452, 454, 456 may be used to display EPG information based on the user’s interests, and patterned blocks 460 are used if there is no EPG information to display. *Id.*, 33:39-53, 34:9-15. Donoghue thus discloses that the **display** of information in the EPG may be edited, not that the underlying EPG information is edited. Therefore, Multimedia’s own “state of the art” evidence does not support its argument that EPG information is edited.



Ex.2013, Fig. 4g

Personal EPG—

In another embodiment of the invention (illustrated in FIG. 4 g), the

program guide comprises a personalized EPG 450. Rather than being populated by past, current, and future-aired content for every program channel, the personalized EPG 450 can be populated only by recommended content (generated by the below-described recommendation engine) and/or user-selected content. As illustrated, program content meeting certain selection criteria (e.g., having a certain, pre-defined threshold of similarity or relation to the user profile) will be presented in an EPG-like interface for user navigation. As shown, various levels of shading and/or coloring or other visual mechanisms are used to indicate the various levels of similarity the given content has to the user's profile. For example, the darkest shaded content 452 may represent content which is most similar to the user profile, as the shading becomes lighter (as in 454, and 456), the relative similarity to the user profile decreases. Other color and/or shading indicators, as well as other visual or even audible indications (e.g., modulated or moving indications, different audible tones, etc.), may be used as well to convey the relative ranking or similarity of the displayed content elements.

Ex.2013, 32-53.

At various times on the timeline, there may be no adequate (e.g., similar or “logically proximate” enough) content to display in the personalized EPG, these instances are indicated by empty, or alternatively patterned blocks 460 on the EPG. It is noted that at these points in the timeline, “moveable” content may be inserted into the personalized EPG and/or the personal timeline.

Ex.2013, 34:9-12.

43. Dr. Surati also cited another portion of Donoghue describing that “[v]arious permutations and mechanisms for generating, adding and editing metadata will be recognized by those skilled in the art.” Ex.2013, 37:5-25; Ex.2010, ¶161. However, this portion of Donoghue is not specifically directed to EPG metadata, and thus does not suggest that it was “desirable” for a user to edit EPG metadata as proposed by Dr. Surati.

IV. CONCLUSION

44. This declaration and my opinions herein are made to the best of my knowledge and understanding, and based on the material available to me, at the time of signing this declaration. I declare that all statements made herein on my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 or Title 18 of the United States Code.

Date: 2 December, 2024



Andrew Lippman, Ph.D.