The following classification changes will be effected by this Notice of Changes:

<table>
<thead>
<tr>
<th>Action</th>
<th>Subclass</th>
<th>Group(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitions Deleted:</td>
<td>H04N</td>
<td>21/226, 21/2323, 21/2326, 21/234381, 21/23602, 21/2365, 21/237, 21/23897,</td>
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<td>21/42615, 21/42623, 21/42638, 21/42653, 21/42661, 21/42676, 21/42692,</td>
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<td>21/4341, 21/4347, 21/43856, 21/4392, 21/44004, 21/440218, 21/4433, 21/4825,</td>
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<td>21/4852, 21/85403, 21/85406</td>
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<tr>
<td>Definitions Modified:</td>
<td>H04N</td>
<td>21/2143, 21/2146, 21/218, 21/21805, 21/21815, 21/2182, 21/21825, 21/2187,</td>
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<td></td>
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</tbody>
</table>

No other subclasses/groups are impacted by this Notice of Changes.
This Notice of Changes includes the following [Check the ones included]:

1. CLASSIFICATION SCHEME CHANGES
   - A. New, Modified or Deleted Group(s)
   - B. New, Modified or Deleted Warning(s)
   - C. New, Modified or Deleted Note(s)
   - D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS
   - A. New or Modified Definitions (Full definition template)
   - B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)
2. A. DEFINITIONS (modified)

Insert the following modifications.

**H04N 21/2143**

**Definition statement**

Delete: The second paragraph, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: GB2411329

**H04N 21/2146**

**Definition statement**

Delete: The second statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP1903800

**H04N 21/218**

**References**

**Limiting references**

Replace: The existing reference symbol G06F16/70 in the Limiting reference table with the new symbol G06F16/739, so that it reads as follows.

| Details of retrieval in video databases | G06F 16/739 |

**H04N 21/21805**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: GB2355137
H04N 21/21815

Definition statement
Delete: The following sentence, shown below, from the paragraph in the Definition statement.

Example(s) of documents found in this subgroup: US2003229684

H04N 21/2182

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US6587640

H04N 21/21825

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO9935562, XP001159230

H04N 21/2187

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2007216783

H04N 21/2221

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US7269841
Definition statement

Delete: The following sentence, shown below, from the paragraph in the Definition statement.

Example(s) of documents found in this subgroup: WO0150401

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP0740470

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO2006101380

Definition statement

Replace: In the existing paragraph the punctuation period (.) with a comma (,) after the terms “upper layer”, but before “e.g. network” so that the updated paragraph reads as follows:

Elementary specialized functions. They can be implemented in software or hardware. Their task is to control the corresponding hardware component and to provide a service to the upper layer, e.g. network synchronization using a master clock for downstream/upstream transmissions.

Synchronization of transmitters.

References

Limiting references

Delete: The entire Limiting references section and table.
The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Handling or recovery of errors occurring in the server | H04N 21/2404 |

H04N 21/231

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 7,017,174 B1

References

Limiting references

Delete: The entire Limiting references section and table.

Insert: The following new Informative references section and table rows.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Retrieving and reading data in the server | H04N 21/232 |
| Server-side memory management | H04N 21/241 |
H04N 21/23109

References

Limiting references

Replace: The existing reference symbol G06F16/71 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of retrieval of video data and associated meta data in video databases | G06F 16/739 |

H04N 21/23113

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0169926 A1

H04N 21/23116

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0202444 A1

H04N 21/2312

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 028 587 A2
H04N 21/232

Definition statement

Replace: The existing Definition statement with the following paragraph.

Operations linked to the retrieval of the multimedia stream from the disks, e.g. disk scheduling and file mapping.

References

Limiting references

Delete: The following table row from the Limiting references table.

| Content storage | H04N 21/231 |

Replace: The existing reference symbol G06F16/73 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of querying and searching of video data from a database | G06F 16/739 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Content storage operation | H04N 21/231 |
H04N 21/233

Definition statement
Delete: The entire Definition statement section.

H04N 21/2335

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US 2004/0013270 A1

H04N 21/234

References

Limiting references
Delete: The entire Limiting references section and table.

Informative references
Insert: The following row into the Informative references table.

| Involving embedding information at multiplex stream level, e.g. embedding a watermark at packet level | H04N 21/23892 |
H04N 21/23406

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2006/0193350 A1, US 2006/0262813 A1

H04N 21/23412

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0110297 A1, US2006222071

References

Limiting references

Delete: The entire Limiting references section and table.

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Scene rendering using a scene graph | H04N 21/44012 |

H04N 21/23418

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 301 039 A2

References

Limiting references
Delete: The existing following table row from the Limiting references table.

| Image analysis per se | G06T 7/00 |

Insert: The following new table row into the Limiting references table.

| Filtering for image enhancement | G06T 5/00 |

Insert: The following new Informative references section and table row.

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

| Image analysis per se | G06T 7/00 |

**H04N 21/23424**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0033633 A1, XP 2098561 A1

**H04N 21/234309**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,747,706 B1
H04N 21/234318

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2006221178

H04N 21/234327

Definition statement

Replace: The existing statements in the Definition statement with the following two bullets.

• Content divided in layers, e.g. base layer and one or more enhancement layers.

• Multiple Description Coding [MDC].

H04N 21/234336

Definition statement

Replace: The existing bullets in the Definition statement with the following two new bullets.

• Transcoding between modalities, e.g. audio to text.

• Slideshow of still pictures transformed in a video.

H04N 21/234345

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0080878 A1
H04N 21/234354

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US 2002/0152317 A1

H04N 21/234363

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US 2006/0039478 A1

H04N 21/234372

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: EP 1 679 893 A2

H04N 21/23439

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: EP 1 796 394 A2
H04N 21/23473

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO0215578

H04N 21/23476

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0021412 A1

H04N 21/235

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,636,890 B1

References

Limiting references

Delete: The entire Limiting references section and table.

Informative references

Insert: The following new table rows into the Informative references table.

| Calculation of the repetition rate and of the timing of insertion of additional data by the server-side scheduler | H04N 21/262 |
| Processing of additional data on the client side | H04N 21/435 |
**H04N 21/2351**

**Definition statement**

Delete: The entire Definition statement section.

**H04N 21/2353**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP2037684

**H04N 21/2356**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 02/33976 A1

**H04N 21/2358**

**Definition statement**

Replace: The term “orginal” in the following paragraph in the Definition statement with the correct term “original”, as shown below.

The server generates at least one other version of the original additional data, which is available together with the original version.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 860 880 A2
H04N 21/236

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 363 439 A1

H04N 21/23608

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: XP 2040478 A1

H04N 21/23611

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0008736 A1

H04N 21/23614

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,976,266 B1
H04N 21/23617

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2004/082289 A1

H04N 21/2362

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 0 917 370 A2

H04N 21/23655

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 0 928 115 A1

H04N 21/2368

Definition statement

Delete: The entire Definition statement section.

References

Limiting references

Delete: The entire Definition statement section.

Insert: The following new Informative references section and table row.
Informative references

Attention is drawn to the following places, which may be of interest for search:

| Generation of timestamps for synchronization purposes | H04N 21/8547 |

H04N 21/238

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0229365 A1, WO 002/5219 A1

H04N 21/23805

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2006/0262813 A1

References

Limiting references

Delete: The entire Definition statement section.

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Video streams retrieval | H04N 21/232 |
Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 953 936 A2

H04N 21/2383

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,591,391 B1

H04N 21/2387

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 5864682 A1

H04N 21/2389

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0217452 A1

H04N 21/23892

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP1255249
H04N 21/23895

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0075285 A1

H04N 21/239

Definition statement

Insert: A period (.) after the letter “g” for “e.g” as shown below.

This interface manages the uplink signals coming from all the clients and is used for example to handle requests (e.g. requests for a particular multimedia service).

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0028897 A1

H04N 21/2393

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0078218 A1

H04N 21/24

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0270598 A1
H04N 21/2401

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0237187 A1

H04N 21/2402

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/054926 A1, US 2007/0153692 A1

H04N 21/2404

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2006218600, WO0031975, US 2002/0066050 A1

H04N 21/2405

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0202444, WO2010058215, US2008209481,
H04N 21/2407

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 03/017640 A1

H04N 21/2408

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0116067 A1

H04N 21/241

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0197073 A1

H04N 21/242

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 339 182 A2
H04N 21/251

References

Limiting references

Delete: The following table row from the Limiting references table.

| Client-side agents | H04N 21/466 |

Replace: The existing reference symbol G06F16/735 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of learning user preferences for the retrieval of video data in a video database | G06F 16/739 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Learning process for intelligent management | H04N 21/466 |

H04N 21/252

Definition statement

Replace: The term “grous” in the paragraph in the Definition statement with the correct term “groups”, as shown below.

Preference data are processed to determine similarities between users. They can be clustered to have a limited number of groups of viewers. They are used to enrich the profile of one user by adding data from similar users.
References

Limiting references

Delete: The following table row from the Limiting references table.

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Deriving a common profile for several users on the same client, e.g. family profile | H04N 21/4661 |

H04N 21/2543

References

Limiting references

Insert: The following new table rows in the Limiting references table.

| Payment architectures, schemes or protocols | G06Q 20/00 |
| Commerce, e.g. shopping or e-commerce | G06Q 30/00 |

H04N 21/258

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0231854 A1
H04N 21/25808

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0066128 A1

H04N 21/25816

Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0118063 A1

H04N 21/25825

Definition statement
Replace: The existing statements in the Definition statement with the following statement:

Clients may be diverse by nature and have different display capabilities, e.g. TV, PC, mobile phone or PDA.

References

Limiting references
Delete: The following table row from the Limiting references table.

| Reformatting of the video stream by the server, e.g. based on client parameters | H04N 21/2343 |

Insert: The following new Informative references section and table row.

Informative references
Attention is drawn to the following places, which may be of interest for search:

| Reformatting of the video stream by the server, e.g. based on client parameters | H04N 21/2343 |

H04N 21/25841

Definition statement

Replace: The entire text in the Definition statement with the following new paragraph:

The server determines or is aware of the location of the client device. The determination can be performed by retrieving data from a HLR in a mobile phone network or by triangulation methods.

Insert: The following new Special rules of classification section and paragraph.

Special rules of classification

This group must be distinguished from user demographical data, classified elsewhere. This group is typically used for targeting location dependent programs or additional information.

H04N 21/25858

References

Limiting references

Delete: The entire Limiting references section and table.

Insert: The following new Informative references section and table rows.

Informative references

Attention is drawn to the following places, which may be of interest for search:
Details of operating systems in clients | H04N 21/443
Executable data, e.g. software | H04N 21/8166

H04N 21/274

References

Limiting references

Delete: The entire Limiting references section and table.

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Management of user data for administrative purposes | H04N 21/25866 |

H04N 21/278

References

Limiting references

Replace: The existing reference symbol G06F16/70 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of content or meta data based information retrieval of video data in video databases | G06F 16/739 |
H04N 21/41

Definition statement

Replace: The existing Definition statement text with the following statement.

Hardware level. Physical description of the multimedia client.

Insert: The following new Special rules of classification section and paragraph.

Special rules of classification

As most of the components are always present, e.g. tuner or memory, there is no need to describe them all to avoid unnecessary classification work. An index should be allocated only if one of the component has a critical function in the invention.

It should be further noted, that most of the components have already an entry in other technical fields and that, for example, the circuitry of a tuner is not part of this model.

H04N 21/4113

Definition statement

Replace: The existing Definition statement text with the following statement.

The client device, typically a STB here, is connected to a personal computer to extract data or software multiplexed with the video signal and to forward it to a PC.
H04N 21/4117

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1492338 A1

H04N 21/4122

Definition statement

Replace: The existing Definition statement text with the following statement.

Additional display device, e.g. projector, not being the main display device, e.g. TV set, which is always present.

H04N 21/4126

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 2023350 A1

H04N 21/4131

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/018102 A2
H04N 21/4135

Definition statement

Replace: The existing Definition statement text with the following statement.

A recording device can be a VCR, an external hard disk, or DVD players as source of video or additional. Personal video recorders with an internal hard disk are covered elsewhere.

H04N 21/41407

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/097006 A1

H04N 21/41415

Definition statement

Replace: The existing Definition statement text with the following statement.

Display device viewable by several users in a public space outside their home, e.g. movie theater or information kiosk. Excludes access points for downloading information.

H04N 21/41422

Definition statement

Replace: The existing Definition statement text with the following statement.

The client device is located in a vehicle, e.g. car entertainment systems.
**H04N 21/4143**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 0 834798 A2

**H04N 21/4147**

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

The client device is a personal video recorder, STB with hard disk.

**H04N 21/418**

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Cards being external components, which can be inserted in a dedicated slot, e.g. smart cards for a conditional access system or extension modules to upgrade the STB capabilities.

**References**

**Limiting references**

**Delete:** The entire Limiting references section and table.
Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Interfacing a plurality of external cards, e.g. through a DVB Common Interface | H04N 21/43607 |

H04N 21/4181

Definition statement

Replace: The existing Definition statement text with the following statement.

Cards holding a key for Conditional Access purposes, e.g. descrambling, or other decryption operations.

H04N 21/4182

Definition statement

Replace: The existing Definition statement text with the following statement.

Card holding identification data of the user, preferences, personal settings or any kind of personal data.

H04N 21/4183

Definition statement

Replace: The existing Definition statement text with the following statement.

Cards having its own processing capabilities, e.g. external module for video decoding.
H04N 21/4184

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Extension module or storage capabilities, e.g. memory sticks.

H04N 21/42201

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Can be used as passive input from the user. Such devices can be heat sensors for presence detection, EEG sensors or any limb activity sensors worn by the user.

H04N 21/42202

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Sensors connected to the client, allowing to determine temperature, luminosity, pressure or earthquakes. Includes position sensors, e.g. GPS.

H04N 21/42203

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Any sound input device can be used to generate audio streams or to enter voice commands.
H04N 21/42204

Definition statement

Replace: The existing Definition statement text with the following statement.

Only remote control devices transmitting input data to the client device and located in the direct vicinity thereof.

H04N 21/4223

Definition statement

Replace: The existing Definition text with the following statement.

Cameras allowing the client to become a video source, e.g. for uploading videos to a server or for identification purposes.

Insert: The following new Glossary of terms section.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

| Camera | Camera has the meaning of image generating device and covers also scanner (paper, fingerprint, retina) or any kind of imaging device. The camera allows the client to become a video source. It can be used for identifying the user or uploading videos to the server. |
Definition statement

Replace: The existing Definition text with the following statement.

The client device is controlled by input devices located at a distant location. A possible application could be that a user uses a mobile phone, a PDA or an office PC to program his STB at home. Input and client device are connected by a wide area network, e.g. internet.

Definition statement

Replace: The term “Additional” in the second bullet in the Definition statement with the correct term “Additional”, as shown below.

- Additional built-in cards.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/057482 A1

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0120676 A1

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0035668 A1
**H04N 21/42646**

**Definition statement**

**Insert:** A period (.) at the end of the statement, as shown below.

Internal reader / writer for DVD's, CD-ROM's and similar disks.

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/088511 A1

**H04N 21/42669**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP1883234 A2

**H04N 21/42684**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1359710 A2

**H04N 21/4305**

**Definition statement**

**Replace:** The existing Definition text with the following statement.

Clock recovery, e.g. extraction of the PCR packets.
H04N 21/4307

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/005268 A2

H04N 21/4312

Definition statement

Insert: A period (.) at the end of the statement, as shown below.

Layout arrangement on the screen, overlays, menus in general.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0184047 A1

H04N21/4314

Definition statement

Replace: The existing Definition text with the following statement.

Creation of a grid for all the textual information is fitted, e.g. in a rectangular grid.
H04N 21/4316

Definition statement

Insert: A period (.) at the end of the statement, as shown below.

A separate window or region is provided to display additional data, like a commercial or additional text.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0124057 A1

H04N 21/4318

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0222994 A1

References

Limiting references

Delete: The following table row from the Limiting references table.

| High-level filtering performed on a region of the image | H04N 21/45455 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| High-level filtering performed on a region of the image | H04N 21/45455 |
**H04N 21/432**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 796 374 A1

**References**

**Limiting references**

Replace: The existing reference symbol G06F16/73 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of retrieval of video data and associated meta data in video database | G06F 16/739 |

**H04N 21/4325**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 968 318 A1

**H04N 21/433**

**Definition statement**

Replace: The existing Definition text with the following statement.

Local storage. The client uses part of his volatile or nonvolatile memory, e.g. hard disk, to store a part of the received multimedia data or data it has generated itself, e.g. monitored data.
H04N 21/4331

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 331 810 A1

H04N 21/4332

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0288988 A1

References

Limiting references

Replace: The existing reference symbol G06F16/71 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Details of retrieval of video data and associated meta data in video database | G06F 16/739 |

H04N 21/4333

Definition statement

Replace: The existing Definition text with the following statement.

The incoming video stream, e.g. from live broadcast, can be paused. It is stored locally to allow the user to resume viewing later on.
**H04N 21/4334**

**Definition statement**

Replace: The existing Definition text with the following statement.

Recording of received data for archiving purposes, i.e. permanent; not caching, which has a temporary aspect.

**References**

**Limiting references**

Insert: The following new table row in the Limiting references table.

| Recording of a television signal | H04N 5/76 |

**H04N 21/4335**

**Definition statement**

Replace: The existing Definition text with the following statement.

The client device has a limited memory. Algorithms, describing which data are prioritized for deletion, e.g. oldest or less used data.

**H04N 21/434**

**Definition statement**

Replace: The existing Definition text with the following statement.

Transport stream demultiplexing. It takes as input transport streams and generates after demultiplexing A/V streams or remultiplexes several TS into a new transport stream. Demultiplexing includes PID filtering.
H04N 21/4342

Definition statement

Delete:  The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 0 777 383 A1

H04N 21/4344

Definition statement

Replace:  The existing Definition text with the following statement.

Modification of bitstream parameters, e.g. re-stamping, trans-multiplexing, or remapping of PIDs.

H04N 21/4345

Definition statement

Delete:  The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/108570 A1, US 2005/0060758 A1

H04N 21/4346

Definition statement

Delete:  The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 555 826 A1

References

Limiting references

Replace:  The existing reference symbol H04J 3/07 in the Limiting references table with the new symbol H04J 3/073, so that it reads as follows.
Synchronisation arrangements in time-division multiplex systems with different or fluctuating information rates

H04N 21/4348

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 03/088645 A1

H04N 21/4349

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2004/082289 A1

H04N 21/4351

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO9962248, WO2004082289, WO 2008/143447 A1

H04N 21/4353

Definition statement

Delete: The entire Definition statement section.
H04N 21/4355

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/142648 A1

H04N 21/4356

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0148314 A1

H04N 21/4358

Definition statement

Replace: The existing Definition text with the following statement.

The client device generates at least one other version of the original additional data, which is available together with the original version.

H04N 21/436

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0124766 A1
H04N 21/43607

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: EP 1 921 857 A2

H04N 21/43615

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: WO 2007/097563 A1

H04N 21/43622

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: EP 1 950 966 A1

H04N 21/4363

Definition statement
Replace: The existing Definition text with the following statement.
Adaptation of the bitstream to the local network, e.g. transport of video over firewire.

H04N 21/43632

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US 2008/0007616 A1
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H04N 21/43637

Definition statement

Delete: The entire Definition statement section.

H04N 21/437

Definition statement

Replace: The existing Definition text with the following statement.

Non-physical details of phone or cable modems. Communication aspects with the server are to be found elsewhere.

H04N 21/438

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 02/069581 A1, US 2007/0006259

H04N 21/4381

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2004/0210939 A1

H04N 21/4382

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/006833 A1
H04N 21/4383

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/130116 A1

H04N 21/4384

**Definition statement**

**Replace:** The existing Definition text with the following statement.

Fast channel change or rapid tuning relate to techniques, where the STB tries to display as quick as possible an image in the time interval starting after the user has issued a channel change command and before the decoding buffer could be filled. Those techniques comprise of, for example, decoding a low resolution stream or a stream sent at a higher rate.

H04N 21/4385

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 2 023 497 A1
H04N 21/43853

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2006/0269063 A1

**References**

**Limiting references**

**Delete:** The following table rows from the Limiting references table.

<table>
<thead>
<tr>
<th>Multiplex stream encryption</th>
<th>H04N 21/23895</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video stream decryption</td>
<td>H04N 21/4405</td>
</tr>
</tbody>
</table>

**Insert:** The following new *Informative references* section and table row.

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

<table>
<thead>
<tr>
<th>Multiplex stream encryption</th>
<th>H04N 21/23895</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video stream decryption</td>
<td>H04N 21/4405</td>
</tr>
</tbody>
</table>

H04N 21/4394

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0209055 A1
**H04N 21/4396**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2005/0278732 A2

**H04N 21/4398**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 775 959 A2

**H04N 21/44008**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: GB 2447876 A

**H04N 21/44012**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 715 681 A2

**H04N 21/44016**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/046212 A1
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**H04N 21/4402**

**Definition statement**

**Delete:** The entire Definition statement section.

**H04N 21/440209**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0081778 A1

**H04N 21/440227**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2006/0117371 A1

**H04N 21/440236**

**Definition statement**

**Replace:** The existing Definition statement text with the following statement.

Transcoding between modalities, e.g. audio to text.

**H04N 21/440245**

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/067731
H04N 21/440254

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,441,754 B1

H04N 21/440263

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/085874 A2

H04N 21/440272

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 02/13507 A2

H04N 21/440281

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 956 840 A1
H04N 21/44029

Definition statement

Replace: The existing Definition statement text with the following statement.

Client devices generating at least one other version of the original content, which is available together with the original version.

H04N 21/4405

References

Limiting references

Delete: The entire Limiting references section and table.

Informative references

Insert: The following new table row in the Informative references table.

<table>
<thead>
<tr>
<th>Arrangements using cryptography for the use of broadcast information or broadcast-related information</th>
<th>H04H 60/23</th>
</tr>
</thead>
</table>

H04N 21/44055

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2009/021953 A1
H04N 21/4408

Definition statement

Replace: The existing Definition statement text with the following statement.

Client devices re-encrypting the decrypted video stream, e.g. with another key. It can be used for secure recording.

References

Limiting references

Delete: The entire Limiting references section and table.

Informative references

Insert: The following new table row in the Informative references table.

| Arrangements using cryptography for the use of broadcast information or broadcast-related information | H04H 60/23 |

H04N 21/441

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0244665 A1, US 2007/0150832 A1

H04N 21/4415

Definition statement

Replace: The existing Definition statement text with the following statement.

The user is passively identified by facial/fingerprint/voice recognition.

Insert: The following new Special rules of classification section and paragraph.
Special rules of classification

When classifying in this group, a corresponding symbol should be added to describe the type of sensor / input device used.

H04N 21/442

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/052711 A2

References

Limiting references

Replace: The existing reference symbol G06F16/78 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Monitoring of user activities for profile generation for accessing a video database | G06F 16/739 |

H04N 21/44204

Definition statement

Replace: The existing Definition statement text with the following statement.

Clients keeping track of how often a piece of content has been viewed or copied or recorded. Covers also records of content ID, percentage of viewed/recorded program.

References

Limiting references

Replace: The existing reference symbol G06F16/78 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.
Monitoring of user activities for profile generation for accessing a video database

H04N 21/44213

Definition statement

Delete: The entire Definition statement section.

H04N 21/44218

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/146089 A2

H04N 21/44227

Definition statement

Insert: A period (.) at the end of the statement, and a comma after the term “Also”, as shown below.

The status of the connection or bandwidth variations on the local network are monitored. Also, detection of new devices in the local network. Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/093426 A2

H04N 21/44231

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 7,035,363 B1
H04N 21/4424

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2009244290, EP2043373, EP1722 555A1

References

Limiting references

Delete: The following table row from the Limiting references table.

| Monitoring or testing of receivers with feedback of measurements to the transmitter | H04B 17/24 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Monitoring or testing of receivers with feedback of measurements to the transmitter | H04B 17/24 |

H04N 21/44245

Definition statement

Replace: The existing Definition statement text with the following statement.

Monitoring of the upstream connection, e.g. its availability or bandwidth.

References

Limiting references

Delete: The entire Limiting references section and table.
Insert: The following new Informative references section and table.

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

| Measuring or estimating channel quality parameters | H04B 17/309 |

**H04N 21/4431**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 890 492 A2

**H04N 21/4432**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 942 658 A2

**H04N 21/4435**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 739 672 A1
H04N 21/4436

Definition statement

Replace: The existing Definition statement text with the following statement.

Battery power management of the receiver, e.g. DVB-H, stand-by mode or shutting down unused parts of the receiver.

H04N 21/4437

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0283391 A1

H04N 21/4438

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0150964 A1

H04N 21/4508

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0205857 A1
**H04N 21/4524**

**Definition statement**

*Replace:* The existing Definition statement text with the following statement.

The geographical position of the client, which can be a regional or ZIP code for a fixed client or data provided by a GPS for a mobile client is used to provide the user with information related to its geographical environment, e.g. regional news or ads.

**H04N 21/4542**

**Definition statement**

*Delete:* The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/051956 A1

**H04N 21/4545**

**Definition statement**

*Delete:* The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0108128 A1

**H04N 21/45452**

**Definition statement**

*Delete:* The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2003/0219708 A1
H04N 21/45455

Definition statement

Replace: The 2nd and 3rd terms “Region” and “Of” in the existing Definition paragraph with the following corrected terms “region” and “of”, respectively, as shown below.

A region of Interest is defined and displayed, blurred or masked. This can be applied to analog or MPEG-2 streams, where the image has been encoded as a whole and not as a set of objects. Therefore, the region is marked and tracked. Censoring systems can require to mask or blur some regions of the image.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0162922 A1

H04N 21/45457

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 00/31973

H04N 21/458

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/072368 A1
H04N 21/4583

Definition statement

Replace: The existing Definition statement text with the following statement.

The client solves automatically conflicts in scheduling issues, like having to perform two operations at the same time, e.g. recording two different movies in the same time slot.

H04N 21/4586

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 005666293A

H04N 21/462

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0205857 A1

H04N 21/4621

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 717 976 A2, US 2003/0126238 A1
H04N 21/4622

**Definition statement**

**Replace:** The entire Definition statement text with the following new bullets.

- The client combines data received from different sources, e.g. EPG data from cable operators, satellite services, internet or internally stored.

- Describes also the connection to the same source via different networks, e.g. a part of the content is distributed via TV broadcast and another one via internet.

H04N 21/4623

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 176 827 A2

H04N 21/4627

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 02/33509 A2

H04N 21/4662

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/054879 A1
H04N 21/4663

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 01/58145 A2

H04N 21/4665

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,460,036 B1

H04N 21/4666

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 03/079688 A1

H04N 21/4667

Definition statement

Replace: The entire Definition statement text with only the following bullets.

• User selections are recorded in a history file, i.e. describing processing operations of the history, e.g. trend analysis or clustering.

• The generation of the user profile, if disclosed explicitly. The dynamic adaptation of the profile is performed by an intelligent agent.
H04N 21/4668

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/063468 A1

H04N 21/47

Definition statement

Replace: The existing Definition statement text with the following statement.

End user applications in the sense of services provided by the multimedia system to the users. There are basically two categories of applications: the ones providing local interactivity and the ones requiring an uplink.

H04N 21/47202

Definition statement

Replace: The existing Definition statement text with the following statement.

True VOD systems allowing to request and receive a movie within a short delay. Therefore, the movie will be streamed only to the requesting user or it will be available on a multicast channel. This group covers also details of the menu to stop, pause, FFWD, RWD or play a movie.

H04N 21/47205

Definition statement

Replace: The entire Definition statement text with the following bullets.

- Users interacting with MPEG-4 objects.
- Editing by the end-user on the client device.
H04N 21/47208

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/024233 A1

H04N 21/47211

Definition statement

Replace: The existing Definition statement text with the following statement.

Broadcast programs not being NVOD associated to a request for purchasing, e.g. free preview programs.

H04N 21/47214

Definition statement

Replace: The 2nd bullet in the existing Definition with the following new bullet.

• Bookmarking operations as well as the request for notification when an event has occurred, e.g. sport results or stock exchange above a given level.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2005/088969 A1
H04N 21/4722

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 97/50251

H04N 21/4725

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2005/0086690 A1

H04N 21/4728

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/057875 A2

H04N21/475

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/099303
H04N 21/4751

Definition statement

Replace: The existing Definition statement text with the following statement.

Master users, e.g. parents, defining several accounts for the users of the client, e.g. for children.

H04N 21/4756

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,816,172 B1

H04N 21/4758

Definition statement

Replace: The existing Definition statement text with the following statement.

Questions and answers. It can be used to poll users about their opinion regarding a problem raised during the TV broadcast, to react on an advertisement or in a TV quiz. This group also covers voting.

H04N 21/478

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0235745 A1
H04N 21/47805

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0087968 A1

H04N 21/4781

Definition statement

Replace: The existing Definition statement text with the following statement.

Only games, which do not interact with the video stream, e.g. MPEG-4 based games, and are not of a question and answer type, e.g. quiz. They can be local or played with remote opponents.

H04N 21/47815

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0282283 A1

H04N 21/4782

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2009/0019495 A1
H04N 21/4784

Definition statement

Replace: The existing Definition statement text with the following statement.

Users receive awards, coupons, prizes, points or air miles.

H04N 21/4788

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2007/117251 A1

H04N 21/482

Definition statement

Replace: The existing Definition statement text with the following statement.

Selection menus allowing the user to select actively a piece of content from a plurality, e.g. a function provided by an Electronic Program Guide.

H04N 21/4821

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2008/0263600 A1
H04N 21/4823

**Definition statement**

**Insert:** A period (.) at the end of the statement, as shown below.

Channels are selected by entering their name instead of number.

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 363204 A2

H04N 21/4826

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/117245 A2

H04N 21/4828

**Definition statement**

**Delete:** The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 6,216,264 B1

**References**

**Limiting references**

**Replace:** The existing reference symbol G06F16/7335 in the Limiting references table with the new symbol G06F16/739, so that it reads as follows.

| Retrieval of video data | G06F 16/739 |
Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2007/0199040 A2

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 03/036949 A1

Definition statement

Insert: A period (.) at the end of the statement, as shown below.

Language selection for e.g. configuration or setup menus or subtitles.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP 1 962 505 A2

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2006/091740 A2
H04N21/488

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US 2002/0176000 A1

H04N 21/4882

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 97/19555

H04N 21/4884

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2004/098193

H04N 21/4886

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO 2008/130061
H04N 21/6125

References

Limiting references

Delete: The following table row from the Limiting references table.

| IP communication protocol | H04N 21/64322 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| IP communication protocol | H04N 21/64322 |

H04N 21/80

References

Limiting references

Delete: The following table row from the Limiting references table.

| Compilation of EPG data containing metadata, also adding additional broadcast schedule data | H04N 21/26283 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Compilation of EPG data containing metadata, also adding additional broadcast schedule data | H04N 21/26283 |
H04N 21/8106

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO2005125205

H04N 21/8113

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2005055722, US2004060070

H04N 21/812

Definition statement

Replace: The existing Definition statement text with the following statement.

The commercial will be itself a mono-media or multimedia object, but may be considered as an external element, which is added to the original content for commercial purposes.

References

Limiting references

Replace: The existing reference symbol G06Q 30/0241 in the Limiting references table with the new symbol G06Q 30/02, so that it reads as follows.

<table>
<thead>
<tr>
<th>Advertising per se</th>
<th>G06Q 30/02</th>
</tr>
</thead>
</table>

75
H04N 21/8126

Definition statement

Replace: The existing Definition statement text with the following statement.

Data should be provided as an extra service in the multimedia distribution system, e.g. stocks, sport results, news tickers or weather information.

References

Limiting references

Delete: The entire Limiting references section and table.

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Operation of end-user applications for supplemental services | H04N 21/478 |

H04N 21/814

Definition statement

Delete: The entire Definition statement section.
H04N 21/8146

Definition statement

Replace: The existing Definition statement text with the following statement.

Graphical objects can be combined with video, for example, in MPEG-4. They can be of 2D or 3D nature. Text can also be considered as long as it is purely graphical and content of the textual information doesn't matter.

H04N 21/8153

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2007154164

H04N 21/816

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO2008054384

H04N 21/8166

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: WO0184824
H04N 21/8173
Definition statement
Replace:  The existing Definition statement text with the following statement.

High-level user applications, e.g. new browser, game to be run on the client only.

H04N 21/818
Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2004197073

H04N 21/8186
Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2002086734

H04N 21/8193
Definition statement
Replace: The existing Definition statement text with the following statement.

STB tools, e.g. decoder software, realplayer, mediaplayer or IPMP tool.

H04N 21/835
Definition statement
Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2006235800
References

Limiting references

Delete: The following table rows from the Limiting references table.

| Video stream encryption in the server | H04N21/2437 |
| Video stream encryption in the client | H04N 21/4408 |

Insert: The following new Informative references section and table row.

Informative references

Attention is drawn to the following places, which may be of interest for search:

| Involving video stream encryption, e.g. re-encrypting a decrypted video stream for redistribution in a home network | H04N 21/4408 |

H04N 21/8352

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2003005451

H04N 21/8355

Definition statement

Replace: The 1st bullet in the existing Definition with the following new bullet.

- The content provider defines how this content has to be used, e.g. if it can be displayed or copied and how often and by which group of users. This information is processed by the client-side rights manager or on the server-side rights management.

Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US2005155079

**H04N 21/83555**

**Definition statement**

Replace: The existing Definition statement text with the following statement.

Structured language for describing usage rules of the content, i.e. REL.

**H04N 21/8358**

**Definition statement**

Replace: The existing Definition statement text with the following statement.

Watermarks being embedded in the content for later verification purposes.

**H04N 21/84**

**Definition statement**

Replace: The 1st bullet in the existing Definition with the following new bullet.

• Program descriptors, e.g. abstract or actors, as video specific metadata defined in MPEG-7. As metadata is a widely used word in a large range of applications, attention should be paid not to classify here aspects like identifiers, watermarks or additional data.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP1496701

**References**

**Limiting references**
Delete: The following table rows from the Limiting references table.

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compilation of the EPG data as such by adding broadcast schedule data to metadata</td>
<td>H04N 21/26283</td>
</tr>
<tr>
<td>Supplemental data specifically related to the content</td>
<td>H04N 21/8133</td>
</tr>
</tbody>
</table>

Insert: The following new Informative references section and table rows.

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

<table>
<thead>
<tr>
<th>Description</th>
<th>CPC Code</th>
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<tbody>
<tr>
<td>Compilation of the EPG data as such by adding broadcast schedule data to metadata</td>
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</tr>
<tr>
<td>Supplemental data specifically related to the content</td>
<td>H04N 21/8133</td>
</tr>
</tbody>
</table>

**H04N 21/8402**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: DE102007002513

**H04N 21/8405**

**Definition statement**

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: EP1898325, WO2008032353
H04N 21/845

Definition statement

Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: US2004047208

H04N 21/8451

Definition statement

Replace: The existing Definition statement text with the following statement.

This place is used to indicate the presence of video structured as in the new coding standard Advanced Video Coding [AVC], also referred to in the literature as JVT, H.264, H.26L, MPEG-4 part 10 (misleading name as the video is NOT coded in object form as in MPEG-4 generally the case).

H04N 21/8453

Definition statement

Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: WO0045388, US2004073923

H04N 21/8455

Definition statement

Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup: GB2441577
H04N 21/8456

Definition statement
Replace: The existing Definition statement text with the following statement.
A video stream is divided into time slices, e.g. segments or scenes.

H04N 21/854

Definition statement
Replace: The existing Definition statement text with the following statement.
High-level tools or processes to generate a multimedia application from basic components. It compiles for example multimedia descriptors, e.g. MHEG, into an interactive application to be run on target STBs.

H04N 21/8541

Definition statement
Replace: The existing Definition statement text with the following statement.
Applications having several sub-scenarios, allowing different story developments.

H04N 21/8543

Definition statement
Delete: The following statement, shown below, in the Definition statement.
Example(s) of documents found in this subgroup:
US2009125938, EP1435738
H04N 21/8545

Definition statement

Replace: The existing Definition statement text with the following statement.

Generation of scripts or executable, e.g. applets, to make an application interactive.

H04N 21/8547

Definition statement

Replace: The term “synchronizing ” in the Definition statement with the correct term “synchronising ”, as shown below.

Describes the generation of timestamps for synchronising different pieces of content such as video, audio or different objects.

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US6976208

H04N 21/8549

Definition statement

Replace: The existing Definition statement text with the following statement.

Generation of a trailer, i.e. selected scenes from the original video, or any edited version from an original, e.g. previews.
H04N 21/858

Definition statement

Replace: The existing Definition statement text with the following statement.

Reference between one of the component and anything else, e.g. between two TV programs or a program and additional information on the internet (URL) or to shopping information. Covers also ATVEF triggers in general.

H04N 21/8583

Definition statement

Delete: The following statement, shown below, in the Definition statement.

Example(s) of documents found in this subgroup: US2003149983

H04N 21/8586

Definition statement

Replace: The existing Definition statement text with the following statement.

Multimedia components are linked in the editing process to internet resource, with the WWW server. This place is used to describe the automatic access to a WWW server via an embedded URL.
## 2. B. DEFINITIONS QUICK FIX

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Location of change (e.g., section title)</th>
<th>Existing reference symbol or text</th>
<th>Action: New symbol; New text</th>
</tr>
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<tbody>
<tr>
<td>H04N21/226</td>
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<td>This place covers: Example(s) of documents found in this subgroup: US2003026280</td>
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<td>H04N21/2323</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: EP 0 992 992 A1</td>
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<tr>
<td>H04N21/2326</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2004/0186951 A1</td>
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<tr>
<td>H04N21/234381</td>
<td>Definition statement</td>
<td>This place covers: Alteration of the frame rate. Example(s) of documents found in this subgroup: US 6,510,554 B1</td>
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<tr>
<td>H04N21/23602</td>
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<tr>
<td>H04N21/2365</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2006/0018379 A1</td>
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<td>H04N21/237</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: WO 9953689 A1</td>
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</tr>
<tr>
<td>H04N21/23897</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2007/0160218 A1</td>
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<tr>
<td>H04N21/42615</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2008/0144747 A1</td>
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<td>Existing reference symbol or text</td>
<td>Action; New symbol; New text</td>
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<tr>
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<td>------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
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<tr>
<td>H04N21/42623</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: EP 1487211 A3</td>
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<tr>
<td>H04N21/42638</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2007/0035668 A1</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/42653</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: WO 00/28518</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/42661</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2003/0108331 A1</td>
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</tr>
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<td>H04N21/42676</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2004/0123329 A1</td>
<td>Delete entire definitions</td>
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<tr>
<td>H04N21/42692</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: EP 1758402 A1</td>
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<tr>
<td>H04N21/4341</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: EP 0776 134 A2</td>
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<tr>
<td>H04N21/4347</td>
<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: US 2003/0026423 A1</td>
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<td>Definition statement</td>
<td>This place covers: Example(s) of documents found in this subgroup: WO 2007/011766 A1</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/4392</td>
<td>Definition statement</td>
<td>This place covers: Buffering of the audio signal. Example(s) of documents found in this subgroup: WO 2007/031918 A2</td>
<td>Delete the entire definition.</td>
</tr>
</tbody>
</table>
### CPC NOTICE OF CHANGES 1177

**DATE:** JANUARY 1, 2022

**PROJECT:** DP0232

<table>
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<th>Action; New symbol; New text</th>
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<tr>
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<td>Definition statement</td>
<td><em>This place covers:</em> Buffer level control. Example(s) of documents found in this subgroup: EP 1 107 601 A2</td>
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<tr>
<td>H04N21/440218</td>
<td>Definition statement</td>
<td><em>This place covers:</em> Transcoding between standards (e.g. MPEG-2 to MPEG-4). Example(s) of documents found in this subgroup: EP 1 372 333 A2</td>
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<tr>
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<td>Definition statement</td>
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<tr>
<td>H04N21/4825</td>
<td>Definition statement</td>
<td><em>This place covers:</em> Example(s) of documents found in this subgroup: WO 2006/094131 A2</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/4852</td>
<td>Definition statement</td>
<td><em>This place covers:</em> Sound volume, mono/stereo. Example(s) of documents found in this subgroup: US 2008/0016532 A1</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/85403</td>
<td>Definition statement</td>
<td><em>This place covers:</em> Example(s) of documents found in this subgroup: WO2008038991</td>
<td>Delete the entire definition.</td>
</tr>
<tr>
<td>H04N21/85406</td>
<td>Definition statement</td>
<td><em>This place covers:</em> Example(s) of documents found in this subgroup: US2004111677</td>
<td>Delete the entire definition.</td>
</tr>
</tbody>
</table>

### NOTES:
- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.