

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 524

DATE: AUGUST 1, 2018

PROJECT RP0156

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

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Symbols Deleted:	H04N	5/3458
Symbols New:	H04N	5/22521, 5/22525, 5/225251, 5/22541, 5/232061, 5/232121, 5/232122, 5/232123, 5/232125, 5/232127, 5/232133, 5/23218, 5/23227, 5/232411, 5/232933, 5/232935, 5/232939, 5/232941, 5/232945, 5/23299, 5/35721, 5/36961, 5/36963, 5/36965, 5/379
	H04N	9/0451, 9/04511, 9/04513, 9/04515, 9/04517, 9/04519, 9/04521, 9/0455, 9/04551, 9/04553, 9/04555, 9/04557, 9/04559, 9/04561, 9/04563
Titles Changed:	H04N	5/225, 5/2251, 5/2254, 5/232, 5/23203, 5/23206, 5/23212, 5/23216, 5/23219, 5/23222, 5/23241, 5/23293, 5/2356, 5/3572, 5/3696
	H04N	9/045
Indents Changed:	H04N	5/23219
Warnings New:	H01L	27/146, 27/307
	H04N	5/2251, 5/22521, 5/22525, 5/2254, 5/22541, 5/232, 5/23206, 5/232061, 5/23212, 5/232121, 5/232122, 5/232123, 5/232125, 5/232127, 5/232133, 5/23218, 5/23227, 5/23241, 5/232411, 5/23293, 5/232933, 5/232939, 5/23299, 5/3572, 5/35721, 5/369, 5/3696, 5/36961, 5/36963, 5/36965, 5/379
	H04N	9/045, 9/0451, 9/04511, 9/04513, 9/04515, 9/04517, 9/04521, 9/0455, 9/04551, 9/04553, 9/04555, 9/04557, 9/04559, 9/04561, 9/04563
DEFINITIONS:		
Definitions New:	H04N	5/2251, 5/23212, 5/232121, 5/232133, 5/23216, 5/23218, 5/23219, 5/23241, 5/23293, 5/232933, 5/23299, 5/2356, 5/361, 5/36965
	H04N	9/04515, 9/04553
Definitions Modified:	H01L	27/146
	H04N	5/225, 5/232, 5/335

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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)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)**SUBCLASS H01L – SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR**

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g. 0,</u> <u>1, 2)</u>	<u>Title</u> <u>(new or modified)</u> <u>“CPC only” text should be enclosed in</u> <u>{curly brackets}</u>	<u>Transferred to#</u>
E	H01L 27/146	3	Imager structures	
E	H01L 27/307	4	{Imager structures}	

SUBCLASS H04N - PICTORIAL COMMUNICATION, e.g. TELEVISION

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level</u> <u>Number of</u> <u>dots (e.g.</u> <u>0, 1, 2)</u>	<u>Title</u> <u>(new or modified)</u> <u>“CPC only” text should be enclosed in</u> <u>{curly brackets}</u>	<u>Transferred to#</u>
M	H04N 5/225	2	Television cameras {; Cameras comprising an electronic image sensor, e.g. digital cameras, video cameras, camcorders, webcams, camera modules specially adapted for being embedded in other devices, e.g. mobile phones, computers or vehicles (constructional details of electronic still picture cameras or digital still picture cameras not peculiar to the presence or use of the electronic image sensor G03B)}	
C	H04N 5/2251	3	{Constructional details}	H04N 5/2251, H04N 5/22521, H04N 5/22525, H04N 5/225251
U	H04N 5/2252	4	{Housings}	
N	H04N 5/22521	4	{Elements optimizing image sensor operations, e.g. EMF protection, heat transfer, moisture or dust}	
N	H04N 5/22525	4	{Electronic viewfinders}	
N	H04N 5/225251	5	{rotatable or detachable}	
C	H04N 5/2254	4	{Mounting of optical parts, e.g. lenses, shutters, filters or optical parts peculiar to the presence or use of an electronic image sensor}	H04N 5/2254, H04N 5/22541
N	H04N 5/22541	5	{Optical arrangements for light-field or plenoptic cameras}	
C	H04N 5/232	3	Devices for controlling television cameras, e.g. remote control {; Control of cameras comprising an electronic image sensor} (H04N 5/235 takes precedence {; Mountings, adjusting means, or light-tight connections, for optical elements G02B 7/00)}	H04N 5/232, H04N 5/23218, H04N 5/23227, H04N 5/23299

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title (new or modified) "CPC only" text should be enclosed in curly brackets</u>	<u>Transferred to#</u>
M	H04N 5/23203	4	{Remote-control signaling for television cameras, cameras comprising an electronic image sensor or for parts thereof, e.g. between main body and another part of camera (distributing sync-signals to television cameras H04N 5/0733)}	
C	H04N 5/23206	5	{Transmission of camera control signals via a network, e.g. Internet}	H04N 5/23206, H04N 5/232061
N	H04N 5/232061	6	{using Master/Slave camera arrangements for affecting the control of camera image capture, e.g. placing the camera in a desirable condition to capture a desired image}	
C	H04N 5/23212	4	{Focusing based on image signals provided by the electronic image sensor}	H04N 5/23212, H04N 5/232121, H04N 5/232122, H04N 5/232123, H04N 5/232125, H04N 5/232127, H04N 5/232133
N	H04N 5/232121	5	{and on active ranging signals, e.g. using light or sound signals emitted toward objects}	
N	H04N 5/232122	5	{based on the difference in phase of signals}	
N	H04N 5/232123	5	{based on contrast or high frequency components of image signals, e.g. hill climbing method}	
N	H04N 5/232125	5	{adjusting depth of field during image capture, e.g. maximizing or setting range based on scene characteristics}	
N	H04N 5/232127	5	{setting of focusing region}	
N	H04N 5/232133	5	{Bracketing relating to the capture of varying focusing conditions}	
M	H04N 5/23216	4	{Control of parameters, e.g. field or angle of view of camera via graphical user interface, e.g. touchscreen}	
N	H04N 5/23218	4	{Control of camera operation based on recognized objects}	
M	H04N 5/23219	5	{where the recognized objects include parts of the human body, e.g. human faces, facial parts or facial expressions}	
M	H04N 5/23222	4	{Computer-aided capture of images, e.g. transfer from script file into camera, check of taken image quality, advice or proposal for image composition or decision on when to take image}	
U	H04N 5/23225	4	{Input of new or changed control program into camera control means}	

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N	H04N 5/23227	4	{involving internal camera communication with the image sensor, e.g. synchronizing or multiplexing SSIS control signals}	
C	H04N 5/23241	4	{Control of camera operation in relation to power supply}	H04N 5/23241, H04N 5/232411
N	H04N 5/232411	5	{where power supply is reduced or conserved by affecting camera operations, e.g. sleep mode, hibernation mode, power off or turning off selective parts of the camera}	
C	H04N 5/23293	4	{Electronic viewfinders}	H04N 5/23293, H04N 5/232933, H04N 5/232935, H04N 5/232939, H04N 5/232941, H04N 5/232945
N	H04N 5/232933	5	{Graphical User Interface [GUI] specifically adapted for controlling image capture or setting capture parameters, e.g. using a touchscreen}	
N	H04N 5/232935	6	{for displaying or modifying preview images prior to image capturing, e.g. variety of image resolutions or capturing parameters}	
N	H04N 5/232939	5	{for displaying additional information relating to control or operation of the camera}	
N	H04N 5/232941	6	{Warning indications}	
N	H04N 5/232945	6	{Region indicators or field of view}	
U	H04N 5/23296	4	{Control of means for changing angle of the field of view, e.g. optical zoom objective, electronic zooming or combined use of optical and electronic zooming (optical details of zoom lenses G02B 15/14; optical zooming only for cameras G03B 5/00)}	
N	H04N 5/23299	4	{Controlling the position of the camera for changing the field of view, e.g. panning, tilting or tracking of objects (TV type tracking systems G01S 3/7864; tracking movement of a target in burglar, theft or intruder alarms, using TV cameras G08B 13/19608)}	
M	H04N 5/2356	4	{Bracketing, i.e. taking a series of images with varying exposure conditions}	
D	H04N 5/3458	5	{ <i>by preserving the color pattern with or without loss of information</i> }	<administrative transfer to H04N 9/04511>
U	H04N 5/357	3	Noise processing, e.g. detecting, correcting, reducing or removing noise	

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C	H04N 5/3572	4	{ the noise originating only from the lens unit, e.g. flare, shading, vignetting or "cos4" (suppressing or minimizing noise in picture signal generation H04N 5/217; correction of colour aberration from a lens H04N 9/04517)}	H04N 5/3572, H04N 5/35721, H04N 9/04517, H04N 9/04519
N	H04N 5/35721	5	{involving a transfer function modeling the optical system, e.g. Optical Transfer Function [OTF], Phase Transfer Function [PhTF] or Modulation Transfer Function [MTF]}	
U	H04N 5/361	4	applied to dark current	
C	H04N 5/369	3	SSIS architecture; Circuitry associated therewith	H04N 5/369, H04N 5/379
C	H04N 5/3696	4	{SSIS architecture characterized by non-identical, non-equidistant or non-planar pixel layout, sensor embedding other types of pixels not meant for producing an image signal, e.g. fovea sensors or display pixels (Imager structures H01L 27/146)}	H01L 27/146, H01L 27/14601, H01L 27/14603, H01L 27/14605, H01L 27/14607, H01L 27/14609, H01L 27/1461, H01L 27/14612, H01L 27/14614, H01L 27/14616, H01L 27/14618, H01L 27/1462, H01L 27/14621, H01L 27/14623, H01L 27/14625, H01L 27/14627, H01L 27/14629, H01L 27/1463, H01L 27/14632, H01L 27/14634, H01L 27/14636, H01L 27/14638, H01L 27/1464, H01L 27/14641, H01L 27/14643, H01L 27/14645, H01L 27/14647, H01L 27/14649, H01L 27/1465, H01L 27/14652, H01L 27/14654, H01L 27/14656, H01L 27/14658, H01L 27/14659, H01L 27/14661, H01L 27/14663, H01L 27/14665,

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				H01L 27/14667, H01L 27/14669, H01L 27/1467, H01L 27/14672, H01L 27/14674, H01L 27/14676, H01L 27/14678, H01L 27/14679, H01L 27/14681, H01L 27/14683, H01L 27/14685, H01L 27/14687, H01L 27/14689, H01L 27/1469, H01L 27/14692, H01L 27/14694, H01L 27/14696, H01L 27/14698, H01L 27/148, H01L 27/14806, H01L 27/14812, H01L 27/14818, H01L 27/14825, H01L 27/14831, H01L 27/14837, H01L 27/14843, H01L 27/1485, H01L 27/14856, H01L 27/14862, H01L 27/14868, H01L 27/14875, H01L 27/14881, H01L 27/14887, H01L 27/14893, H01L 27/307, H04N 5/3696, H04N 5/36961, H04N 5/36963, H04N 5/36965
N	H04N 5/36961	5	{the other type of pixels are pixels specially adapted for focusing, e.g. phase difference pixel sets}	
N	H04N 5/36963	5	{Details of pixels used only for dark current, e.g. dummy pixels or optical black pixels}	
N	H04N 5/36965	5	{the other type of pixels are pixels for depth measurement, e.g. RGBZ where Z is the depth pixel or embedded time-of-flight pixels (depth pixels used only for focusing H04N 5/36961)}	

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U	H04N 5/378	4	Readout circuits, e.g. correlated double sampling [CDS] circuits, output amplifiers or A/D converters	
N	H04N 5/379	4	{Details of the architecture or circuitry being divided to different or multiple substrates, chips or circuit boards, e.g. stacked image sensors (line sensors H04N 5/3694)}	
U	H04N 9/00	0	Details of colour television systems	
U	H04N 9/04	1	Picture signal generators	
C	H04N 9/045	2	{using solid-state devices (scanning of colour motion picture films H04N 9/11; Imager structures H01L27/146)}	H01L 27/146 , H01L 27/14601, H01L 27/14603, H01L 27/14605, H01L 27/14607, H01L 27/14609, H01L 27/1461, H01L 27/14612, H01L 27/14614, H01L 27/14616, H01L 27/14618, H01L 27/1462, H01L 27/14621, H01L 27/14623, H01L 27/14625, H01L 27/14627, H01L 27/14629, H01L 27/1463, H01L 27/14632, H01L 27/14634, H01L 27/14636, H01L 27/14638, H01L 27/1464, H01L 27/14641, H01L 27/14643, H01L 27/14645, H01L 27/14647, H01L 27/14649, H01L 27/1465, H01L 27/14652, H01L 27/14654, H01L 27/14656, H01L 27/14658, H01L 27/14659, H01L 27/14661, H01L 27/14663, H01L 27/14665, H01L 27/14667, H01L 27/14669, H01L 27/1467,

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				H01L 27/14672, H01L 27/14674, H01L 27/14676, H01L 27/14678, H01L 27/14679, H01L 27/14681, H01L 27/14683, H01L 27/14685, H01L 27/14687, H01L 27/14689, H01L 27/1469, H01L 27/14692, H01L 27/14694, H01L 27/14696, H01L 27/14698, H01L 27/148, H01L 27/14806, H01L 27/14812, H01L 27/14818, H01L 27/14825, H01L 27/14831, H01L 27/14837, H01L 27/14843, H01L 27/1485, H01L 27/14856, H01L 27/14862, H01L 27/14868, H01L 27/14875, H01L 27/14881, H01L 27/14887, H01L 27/14893, H01L 27/307, H04N 9/045, H04N 9/0451, H04N 9/04511, H04N 9/04513, H04N 9/04515, H04N 9/04517, H04N 9/04519, H04N 9/04521, H04N 9/0455, H04N 9/04551, H04N 9/04553, H04N 9/04555, H04N 9/04557, H04N 9/04559, H04N 9/04561, H04N 9/04563
N	H04N 9/0451	3	{characterized by colour imaging operations}	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title (new or modified) "CPC only" text should be enclosed in {curly brackets}	Transferred to#
N	H04N 9/04511	4	{by partially reading a SSIS to preserve the colour pattern with or without loss of information}	
N	H04N 9/04513	4	{to modify Gamut}	
N	H04N 9/04515	4	{Demosaicing, e.g. interpolating colour pixel values (Computational demosaicing G06T 3/4015)}	
N	H04N 9/04517	4	{Correcting colour aberration of lenses}	
N	H04N 9/04519	5	{using transfer functions modeling the optical system, e.g. Optical Transfer Function [OTF], Phase Transfer Function [PhTF] or Modulation Transfer Function [MTF]}	
N	H04N 9/04521	4	{Colour sequential image capture, e.g. using a colour wheel}	
N	H04N 9/0455	3	{Colour filter architecture (colour filters structurally associated with image sensors H01L 27/146)}	
N	H04N 9/04551	4	{Mosaic colour filter}	
N	H04N 9/04553	5	{including elements transmitting or passing infrared wavelengths}	
N	H04N 9/04555	5	{including elements transmitting or passing panchromatic light, e.g. white light}	
N	H04N 9/04557	5	{based on three different wavelength filter elements}	
N	H04N 9/04559	5	{based on four or more different wavelength filter elements}	
N	H04N 9/04561	6	{using complementary colours}	
N	H04N 9/04563	4	{colour separation based on photon absorption depth, e.g. full colour resolution obtained simultaneously at each pixel location}	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; E= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- For U groups, the minimum requirement is to include the U group located immediately prior to the N group or N group array, in order to show the N group hierarchy and improve the readability and understanding of the scheme. Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types except "D" which requires only a symbol.
- #“Transferred to” column must be completed for all C, D, and Q type entries.

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- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>” or “<administrative transfer to XX and YY simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be “invention information”, unless otherwise indicated, and to 2000 series groups is assumed to be “additional information”.

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B. New, Modified or Deleted Warning notice(s)

SUBCLASS H01L – SEMICONDUCTOR DEVICES; ELECTRIC SOLID STATE DEVICES NOT OTHERWISE PROVIDED FOR

<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H01L 27/146		Groups H01L 27/146 – H01L 27/14893 are incomplete pending reclassification of documents from groups H04N 5/3696 and H04N 9/045. Groups H04N 5/3696, H04N 9/045, and H01L 27/146 – H01L 27/14893 should be considered in order to perform a complete search.
N	H01L 27/307		Group H01L 27/307 is incomplete pending reclassification of documents from groups H04N 5/3696 and H04N 9/045. Groups H04N 5/3696, H04N 9/045, and H01L 27/307 should be considered in order to perform a complete search.

SUBCLASS H04N - PICTORIAL COMMUNICATION, e.g. TELEVISION

<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H04N 5/2251		Group H04N 5/2251 is impacted by reclassification into groups H04N 5/22521, H04N 5/22525, and H04N 5/225251. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/22521		Group H04N 5/22521 is incomplete pending reclassification of documents from group H04N 5/2251. Groups H04N 5/2251 and H04N 5/22521 should be considered in order to perform a complete search.
N	H04N 5/22525		Groups H04N 5/22525 and H04N 5/225251 are incomplete pending reclassification of documents from group H04N 5/2251. Groups H04N 5/2251, H04N 5/22525 and H04N 5/225251 should be considered in order to perform a complete search.
N	H04N 5/2254		Group H04N 5/2254 is impacted by reclassification into group H04N 5/22541. Groups H04N 5/2254 and H04N 5/22541 should be considered in order to perform a complete search.
N	H04N 5/22541		Group H04N 5/22541 is incomplete pending reclassification of documents from group H04N 5/2254. Groups H04N 5/2254 and H04N 5/22541 should be considered in order to perform a complete search.
N	H04N 5/232		Group H04N 5/232 is impacted by reclassification into groups H04N 5/23218, H04N 5/23227, and H04N 5/23299. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/23206		Group H04N 5/23206 is impacted by reclassification into group H04N 5/232061. Groups H04N 5/23206 and H04N 5/232061 should be considered in order to perform a complete search.

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H04N 5/232061		Group H04N 5/232061 is incomplete pending reclassification of documents from group H04N 5/23206. Groups H04N 5/23206 and H04N 5/232061 should be considered in order to perform a complete search.
N	H04N 5/23212		Group H04N 5/23212 is impacted by reclassification into groups H04N 5/232121, H04N 5/232122, H04N 5/232123, H04N 5/232125, H04N 5/232127, and H04N 5/232133. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/232121		Group H04N 5/232121 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232121 should be considered in order to perform a complete search.
N	H04N 5/232122		Group H04N 5/232122 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232122 should be considered in order to perform a complete search.
N	H04N 5/232123		Group H04N 5/232123 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232123 should be considered in order to perform a complete search.
N	H04N 5/232125		Group H04N 5/232125 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232125 should be considered in order to perform a complete search.
N	H04N 5/232127		Group H04N 5/232127 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232127 should be considered in order to perform a complete search.
N	H04N 5/232133		Group H04N 5/232133 is incomplete pending reclassification of documents from group H04N 5/23212. Groups H04N 5/23212 and H04N 5/232133 should be considered in order to perform a complete search.
N	H04N 5/23218		Group H04N 5/23218 is incomplete pending reclassification of documents from group H04N 5/232. Groups H04N 5/232 and H04N 5/23218 should be considered in order to perform a complete search.
N	H04N 5/23227		Group H04N 5/23227 is incomplete pending reclassification of documents from group H04N 5/232. Groups H04N 5/232 and H04N 5/23227 should be considered in order to perform a complete search.
N	H04N 5/23241		Group H04N 5/23241 is impacted by reclassification into group H04N 5/232411. Groups H04N 5/23241 and H04N 5/232411 should be considered in order to perform a complete search.
N	H04N 5/232411		Group H04N 5/232411 is incomplete pending reclassification of documents from group H04N 5/23241. Groups H04N 5/23241 and H04N 5/232411 should be considered in order to perform a complete search.

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H04N 5/23293		Group H04N 5/23293 is impacted by reclassification into groups H04N 5/232933, H04N 5/232935, H04N 5/232939, H04N 5/232941, and H04N 5/232945. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/232933		Groups H04N 5/232933 and H04N 5/232935 are incomplete pending reclassification of documents from group H04N 5/23293. Groups H04N 5/23293, H04N 5/232933 and H04N 5/232935 should be considered in order to perform a complete search.
N	H04N 5/232939		Groups H04N 5/232939, H04N 5/232941 and H04N 5/232945 are incomplete pending reclassification of documents from group H04N 5/23293. Groups H04N 5/23293, H04N 5/232939, H04N 5/232941 and H04N 5/232945 should be considered in order to perform a complete search.
N	H04N 5/23299		Group H04N 5/23299 is incomplete pending reclassification of documents from group H04N 5/232. Groups H04N 5/232 and H04N 5/23299 should be considered in order to perform a complete search.
N	H04N 5/3572		Group H04N 5/3572 is impacted by reclassification into groups H04N 5/35721, H04N 9/04517, and H04N 9/04519. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/35721		Group H04N 5/35721 is incomplete pending reclassification of documents from group H04N 5/3572. Groups H04N 5/3572 and H04N 5/35721 should be considered in order to perform a complete search.
N	H04N 5/369		Group H04N 5/369 is impacted by reclassification into group H04N 5/379. Groups H04N 5/369 and H04N 5/379 should be considered in order to perform a complete search.
N	H04N 5/3696		Group H04N 5/3696 is impacted by reclassification into groups H01L 27/146 – H01L 27/14893, H01L 27/307, H04N 5/36961, H04N 5/36963, and H04N 5/36965. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 5/36961		Group H04N 5/36961 is incomplete pending reclassification of documents from group H04N 5/3696. Groups H04N 5/3696 and H04N 5/36961 should be considered in order to perform a complete search.
N	H04N 5/36963		Group H04N 5/36963 is incomplete pending reclassification of documents from group H04N 5/3696. Groups H04N 5/3696 and H04N 5/36963 should be considered in order to perform a complete search.
N	H04N 5/36965		Group H04N 5/36965 is incomplete pending reclassification of documents from group H04N 5/3696. Groups H04N 5/3696 and H04N 5/36965 should be considered in order to perform a complete search.
N	H04N 5/379		Group H04N 5/379 is incomplete pending reclassification of documents from group H04N 5/369. Groups H04N 5/369 and H04N 5/379 should be considered in order to perform a complete search.

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H04N 9/045		Group H04N 9/045 is impacted by reclassification into groups H01L 27/146 – H01L 27/14893, H01L 27/307, H04N 9/0451, H04N 9/04511, H04N 9/04513, H04N 9/04515, H04N 9/04517, H04N 9/04519, H04N 9/04521, H04N 9/0455, H04N 9/04551, H04N 9/04553, H04N 9/04555, H04N 9/04557, H04N 9/04559, H04N 9/04561, and H04N 9/04563. All groups listed in this Warning should be considered in order to perform a complete search.
N	H04N 9/0451		Group H04N 9/0451 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/0451 should be considered in order to perform a complete search.
N	H04N 9/04511		Group H04N 9/04511 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04511 should be considered in order to perform a complete search.
N	H04N 9/04513		Group H04N 9/04513 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04513 should be considered in order to perform a complete search.
N	H04N 9/04515		Group H04N 9/04515 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04515 should be considered in order to perform a complete search.
N	H04N 9/04517		Groups H04N 9/04517 and H04N 9/04519 are incomplete pending reclassification of documents from groups H04N 5/3572 and H04N 9/045. Groups H04N 5/3572, H04N 9/045, H04N 9/04517, and H04N 9/04519 should be considered in order to perform a complete search.
N	H04N 9/04521		Group H04N 9/04521 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04521 should be considered in order to perform a complete search.
N	H04N 9/0455		Group H04N 9/0455 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/0455 should be considered in order to perform a complete search.
N	H04N 9/04551		Group H04N 9/04551 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04551 should be considered in order to perform a complete search.
N	H04N 9/04553		Group H04N 9/04553 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04553 should be considered in order to perform a complete search.
N	H04N 9/04555		Group H04N 9/04555 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04555 should be considered in order to perform a complete search.

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<u>Type*</u>	<u>Location</u>	<u>Old Warning notice</u>	<u>New/Modified Warning notice</u>
N	H04N 9/04557		Group H04N 9/04557 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04557 should be considered in order to perform a complete search.
N	H04N 9/04559		Group H04N 9/04559 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04559 should be considered in order to perform a complete search.
N	H04N 9/04561		Group H04N 9/04561 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04561 should be considered in order to perform a complete search.
N	H04N 9/04563		Group H04N 9/04563 is incomplete pending reclassification of documents from group H04N 9/045. Groups H04N 9/045 and H04N 9/04563 should be considered in order to perform a complete search.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

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2. A. DEFINITIONS (new)

Insert the following new definitions.

H04N 5/2251

References

Informative references

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

Arrangement comprising a plurality of cameras

H04N 5/247

H04N 5/23212

Relationships with other classification places

Focusing aids not based on image signals provided by an electronic image sensor are classified in [G03B 13/18](#). Constructional details of means for focusing for cameras are classified in [G03B 13/32](#).

References

Informative references

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

Generation of focusing signals in general

G02B 7/28

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H04N 5/232121

Relationships with other classification places

Rangefinders coupled with focusing arrangements are classified in [G03B 13/20](#).

H04N 5/232133

References

Informative references

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

Bracketing for compensating for variations in the brightness	H04N 5/2356
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H04N 5/23216

Definition statement

This place covers:

User interfaces to control camera parameters which can be separated from or integrated in the camera.

References

Informative references

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

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GUI specifically adapted for controlling image capture or setting capture parameters, e.g. using a touchscreen	H04N 5/232933
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H04N 5/23218

References

Informative references

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

Object recognition per se	G06K 9/00
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H04N 5/23219

References

Informative references

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

Face recognition per se	G06K 9/00221
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H04N 5/23241

Relationships with other classification places

Details of energy supply or management for digital still cameras not peculiar to the electronic image sensor are classified in [G03B 7/26](#) or [G03B 2217/007](#).

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H04N 5/23293

Definition statement

This place covers:

Camera viewfinders displaying image signals provided by an electronic image sensor and optionally displaying additional information related to control or operation of the camera.

Relationships with other classification places

Camera viewfinders not displaying image signals provided by an electronic image sensor are classified in [G03B 13/02](#).

H04N 5/232933

Definition statement

This place covers:

A graphical user interface, e.g. a touchscreen, which is integrated on an electronic viewfinder.

References

Informative references

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

Control of parameters, e.g. field/angle of view of camera via graphical user interface, e.g. touchscreen	H04N 5/23216
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H04N 5/23299**References*****Limiting references****This place does not cover:*

TV type tracking system	G01S 3/7864
Tracking of movement using TV cameras of a target in burglar, theft, or intruder alarms	G08B 13/19608

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

Determining position or orientation of objects by image processing in general	G06T 7/70
Analysis of motion by image processing in general	G06T 7/20

H04N 5/2356**References*****Informative references****Attention is drawn to the following places, which may be of interest for search:*

Bracketing for focusing	H04N 5/232133
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H04N 5/361

Definition statement

This place covers:

Subject matter related to dark current noise, also referred to as black level or optical black, which is generated electrons within the image signals of the pixels of an electronic image sensor that are not generated from the light received at the pixels during capture of an image. It is generally due to generation of electrons within the pixels from the surrounding circuitry and can also vary with respect to operational temperature of the electronic image sensor.

H04N 5/36965

References

Limiting references

This place does not cover:

Depth pixels used only for focusing	H04N 5/36961
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Informative references

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

Time-of-flight in general	G01S 7/4865
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H04N 9/04515

Definition statement

This place covers:

Demosaicing, i.e. interpolating colour pixel values, only if jointly performed in combination with pixel scanning, image readout or different video processing operations within the image sensor.

References

Limiting references

This place does not cover:

Computational demosaicing	G06T 3/4015
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H04N 9/04553

References

Informative references

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

Transforming infrared radiation	H04N 5/33
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2. A. DEFINITIONS (modified)

H01L 27/146

References

Limiting references

Delete: The existing **Limiting references** section and table.

Insert: The following new **Special rules of classification** section.

Special rules of classification

Imaging devices having components using inorganic materials only are classified in [H01L 27/146](#).

Imaging devices having components using organic materials or a combination of organic materials and other materials are classified in [H01L 27/307](#).

H04N 5/225

References

Limiting references

This place does not cover:

Delete: The existing text in table row G03B:

Constructional details not peculiar to the presence or use of the EIS in electronic still picture cameras, digital still picture camera.

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Replace: With the following text:

Constructional details in electronic still picture cameras, digital still picture cameras not peculiar to the presence or use of the electronic image sensor	G03B
--	------

H04N5/232

Definition statement

This place covers:

Delete: The following punctuation “...” immediately following the text “still capture mode”.

Insert: The following term

“, etc.”

immediately following the text “still capture mode”.

The resulting text (4th line of the paragraph) will be “or playback mode, autofocus mode, video mode, still capture mode, etc., panoramic field of view, power”

References

Limiting References

This place does not cover:

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

Mountings, adjusting means, or light-tight connections, for optical elements	G02B 7/00
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H04N 5/335

Special rules of classification

Delete: The first paragraph in the **Special rules of classification**

Groups [H04N 5/335](#) - [H04N 5/378](#) correspond to former ECLA groups [H04N 5/2173](#)-[H04N 5/2176](#); [H04N 5/335](#) and [H04N 3/15](#)-[H04N 3/1568](#); they are presently being reclassified.

Replace: The symbol [H04N 5/3458](#) in the 4th bulleted paragraph with [H04N 9/04511](#).

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3. REVISION CONCORDANCE LIST (RCL)

<u>Type*</u>	<u>From CPC Symbol (existing)</u>	<u>To CPC Symbol(s)</u>
C	H04N 5/2251	H04N 5/2251, H04N 5/22521, H04N 5/22525, H04N 5/225251
C	H04N 5/2254	H04N 5/2254, H04N 5/22541
C	H04N 5/232	H04N 5/232, H04N 5/23218, H04N 5/23227, H04N 5/23299
C	H04N 5/23206	H04N 5/23206, H04N 5/232061
C	H04N 5/23212	H04N 5/23212, H04N 5/232121, H04N 5/232122, H04N 5/232123, H04N 5/232125, H04N 5/232127, H04N 5/232133
C	H04N 5/23241	H04N 5/23241, H04N 5/232411
C	H04N 5/23293	H04N 5/23293, H04N 5/232933, H04N 5/232935, H04N 5/232939, H04N 5/232941, H04N 5/232945
D	H04N 5/3458	<administrative transfer to H04N 9/04511>
C	H04N 5/3572	H04N 5/3572, H04N 5/35721, H04N 9/04517, H04N 9/04519
C	H04N 5/369	H04N 5/369, H04N 5/379
C	H04N 5/3696	H01L 27/146, H01L 27/14601, H01L 27/14603, H01L 27/14605, H01L 27/14607, H01L 27/14609, H01L 27/1461, H01L 27/14612, H01L 27/14614, H01L 27/14616, H01L 27/14618, H01L 27/1462, H01L 27/14621, H01L 27/14623, H01L 27/14625, H01L 27/14627, H01L 27/14629, H01L 27/1463, H01L 27/14632, H01L 27/14634, H01L 27/14636, H01L 27/14638, H01L 27/1464, H01L 27/14641, H01L 27/14643, H01L 27/14645, H01L 27/14647, H01L 27/14649, H01L 27/1465, H01L 27/14652, H01L 27/14654, H01L 27/14656, H01L 27/14658, H01L 27/14659, H01L 27/14661, H01L 27/14663, H01L 27/14665, H01L 27/14667, H01L 27/14669, H01L 27/1467, H01L 27/14672, H01L 27/14674, H01L 27/14676, H01L 27/14678, H01L 27/14679, H01L 27/14681, H01L 27/14683, H01L 27/14685, H01L 27/14687, H01L 27/14689, H01L 27/1469, H01L 27/14692, H01L 27/14694, H01L 27/14696, H01L 27/14698, H01L 27/148, H01L 27/14806, H01L 27/14812, H01L 27/14818, H01L 27/14825, H01L 27/14831, H01L 27/14837, H01L 27/14843, H01L 27/1485, H01L 27/14856, H01L 27/14862, H01L 27/14868, H01L 27/14875, H01L 27/14881, H01L 27/14887, H01L 27/14893, H01L 27/307, H04N 5/3696, H04N 5/36961, H04N 5/36963, H04N 5/36965

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<u>Type*</u>	<u>From CPC Symbol (existing)</u>	<u>To CPC Symbol(s)</u>
C	H04N 9/045	H01L 27/146, H01L 27/14601, H01L 27/14603, H01L 27/14605, H01L 27/14607, H01L 27/14609, H01L 27/1461, H01L 27/14612, H01L 27/14614, H01L 27/14616, H01L 27/14618, H01L 27/1462, H01L 27/14621, H01L 27/14623, H01L 27/14625, H01L 27/14627, H01L 27/14629, H01L 27/1463, H01L 27/14632, H01L 27/14634, H01L 27/14636, H01L 27/14638, H01L 27/1464, H01L 27/14641, H01L 27/14643, H01L 27/14645, H01L 27/14647, H01L 27/14649, H01L 27/1465, H01L 27/14652, H01L 27/14654, H01L 27/14656, H01L 27/14658, H01L 27/14659, H01L 27/14661, H01L 27/14663, H01L 27/14665, H01L 27/14667, H01L 27/14669, H01L 27/1467, H01L 27/14672, H01L 27/14674, H01L 27/14676, H01L 27/14678, H01L 27/14679, H01L 27/14681, H01L 27/14683, H01L 27/14685, H01L 27/14687, H01L 27/14689, H01L 27/1469, H01L 27/14692, H01L 27/14694, H01L 27/14696, H01L 27/14698, H01L 27/148, H01L 27/14806, H01L 27/14812, H01L 27/14818, H01L 27/14825, H01L 27/14831, H01L 27/14837, H01L 27/14843, H01L 27/1485, H01L 27/14856, H01L 27/14862, H01L 27/14868, H01L 27/14875, H01L 27/14881, H01L 27/14887, H01L 27/14893, H01L 27/307, H04N 9/045, H04N 9/0451, H04N 9/04511, H04N 9/04513, H04N 9/04515, H04N 9/04517, H04N 9/04519, H04N 9/04521, H04N 9/0455, H04N 9/04551, H04N 9/04553, H04N 9/04555, H04N 9/04557, H04N 9/04559, H04N 9/04561, H04N 9/04563

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries.

NOTES:

- Only C, D, F and Q type entries are included in the table above.
- When multiple symbols are included in the “To” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>” or “<administrative transfer to XX and YY simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be “invention information”, unless otherwise indicated, and to 2000 series groups is assumed to be “additional information”.

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
H04N 5/22521	H04N 5/225	NEW
H04N 5/22525	H04N 5/225	NEW
H04N 5/225251	H04N 5/225	NEW
H04N 5/22541	H04N 5/225	NEW
H04N 5/232061	H04N 5/232	NEW
H04N 5/232121	H04N 5/232	NEW
H04N 5/232122	H04N 5/232	NEW
H04N 5/232123	H04N 5/232	NEW
H04N 5/232125	H04N 5/232	NEW
H04N 5/232127	H04N 5/232	NEW
H04N 5/232133	H04N 5/232	NEW
H04N 5/23218	H04N 5/232	NEW
H04N 5/23227	H04N 5/232	NEW
H04N 5/232411	H04N 5/232	NEW
H04N 5/232933	H04N 5/232	NEW
H04N 5/232935	H04N 5/232	NEW
H04N 5/232939	H04N 5/232	NEW
H04N 5/232941	H04N 5/232	NEW
H04N 5/232945	H04N 5/232	NEW
H04N 5/23299	H04N 5/232	NEW
H04N 5/3458		DELETE
H04N 5/35721	H04N 5/357	NEW
H04N 5/36961	H04N 5/369	NEW
H04N 5/36963	H04N 5/369	NEW
H04N 5/36965	H04N 5/369	NEW
H04N 5/379	H04N 5/369	NEW
H04N 9/0451	H04N 9/04	NEW
H04N 9/04511	H04N 9/04	NEW
H04N 9/04513	H04N 9/04	NEW
H04N 9/04515	H04N 9/04	NEW
H04N 9/04517	H04N 9/04	NEW
H04N 9/04519	H04N 9/04	NEW
H04N 9/04521	H04N 9/04	NEW
H04N 9/0455	H04N 9/04	NEW
H04N 9/04551	H04N 9/04	NEW
H04N 9/04553	H04N 9/04	NEW
H04N 9/04555	H04N 9/04	NEW
H04N 9/04557	H04N 9/04	NEW
H04N 9/04559	H04N 9/04	NEW
H04N 9/04561	H04N 9/04	NEW
H04N 9/04563	H04N 9/04	NEW

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*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with “NEW.”
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with “UPDATED.”
- For a (D) CPC entry or indexing entry complete the Action column with “DELETE.” IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with “NEW”.
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with “CPCONLY” and complete the action column with “NEW”.

NOTES:

- F symbols are not included in the CICL table above.
- E and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.