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**Datasheet for the decision
of 8 October 2014**

Case Number: T 0845/11 - 3.5.05
Application Number: 06125783.8
Publication Number: 1802042
IPC: H04L12/28, G06F3/042, G06F3/033
Language of the proceedings: EN

Title of invention:

Apparatus and method for controlling home network devices

Applicant:

Samsung Electronics Co., Ltd.

Headword:

Apparatus and method for controlling home network devices/
SAMSUNG

Relevant legal provisions:

EPC Art. 56, 84, 123(2)
RPBA Art. 12(2), 12(4), 13(1), 13(3), 15(3)

Keyword:

Inventive step -
main request and auxiliary requests 1 to 11 and 13 to 17 (no)
Clarity -
main request, auxiliary requests 1 to 3, 7 and 13 to 17 (no)
Late-filed auxiliary requests -
amendments after arrangement of oral proceedings / non-
attendance
Late-filed auxiliary request 12 - admitted (no)
Late-filed auxiliary requests - request clearly allowable (no)

Decisions cited:

Catchword:



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European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0845/11 - 3.5.05

**D E C I S I O N
of Technical Board of Appeal 3.5.05
of 8 October 2014**

Appellant: Samsung Electronics Co., Ltd.
(Applicant) 129, Samsung-ro
Yeongtong-gu
Suwon-si, Gyeonggi-do, 443-742 (KR)

Representative: Land, Addick Adrianus Gosling
Arnold & Siedsma
Bezuidenhoutseweg 57
2594 AC The Hague (NL)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 29 November 2010 refusing European patent application No. 06125783.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: M. Höhn
D. Prietzel-Funk

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division, posted on 29 November 2010, refusing European patent application No. 06125783.8 on the ground of lack of inventive step (Article 56 EPC) with regard to prior-art publication:

D1: US 2003/0007104 A1.

II. The notice of appeal was received on 5 January 2011. The appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 8 April 2011. The appellant requested that the appealed decision be set aside and that a patent be granted on the basis of the main request and first to eleventh auxiliary requests, all submitted with the statement setting out the grounds of appeal. Oral proceedings were requested as an auxiliary measure.

III. With a communication dated 11 July 2014 the board summoned the appellant to oral proceedings on 8 October 2014. In an annex to the summons the board expressed its preliminary opinion that none of the requests fulfilled the requirements of Article 123(2) EPC, and lacked clarity (Article 84 EPC) and inventive step (Article 56 EPC) in view of D1 and

D2: US 2005/0041112 A1,

D3: WO 01/47285 A1 and

D4: EP 1087327 A2

which were introduced on the board's own motion according to Article 114(1) EPC. The board gave reasons why the appellant's arguments were not convincing.

- IV. By letter dated 8 September 2014 the appellant submitted eight sets of claims according to amended fourth and ninth auxiliary requests and additional auxiliary requests 12 to 17 supported by arguments in favour of clarity and inventive step.
- V. By letter dated 6 October 2014 the appellant informed the board that it would not be attending the oral proceedings.
- VI. The appellant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or on the basis of auxiliary requests 1 to 3, 5 to 8, 10 or 11 submitted with the letter setting out the grounds of appeal, or on the basis of the claims of auxiliary requests 4, 9 or 12 to 17 submitted with the letter dated 8 September 2014.
- VII. Independent claim 9 according to the main request reads as follows:

"A method of controlling home network devices, the method comprising:
characterised by:
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;
mapping the controlled device and an item corresponding to the controlled device in the device list according

to the light information detected in the received first image,
displaying (S711) a mesh pattern having a color corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting (S714) a coordinate system corresponding to the compensated display area."

VIII. Independent claim 9 according to the first auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising: displaying (S721) in a display unit (390) of an apparatus (300) for controlling the home network devices a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list displayed in the display unit (390) of the apparatus (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;
mapping the controlled device and an item corresponding to the controlled device in the device list according to the light information detected in the received first image,
displaying a mesh pattern having a color in the display unit (390) of the apparatus (300) corresponding to a display area;
receiving a second image containing the mesh pattern;

compensating a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting a coordinate system corresponding to the compensated display area."

IX. Independent claim 9 according to the second auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
displaying (S721) in a display unit (390) of an apparatus (300) for controlling the home network devices a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list displayed in the display unit (390) of the apparatus (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;
mapping the controlled device and an item corresponding to the controlled device in the device list according to the light information detected in the received first image,
displaying (S711) a mesh pattern having a color in the display unit (390) of the apparatus (300) corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image;

compensating an image color of the second image by comparing a mesh data color displayed via the display unit (390) and a mesh data color detected in the received second image;

and

setting (S714) a coordinate system corresponding to the compensated display area."

- X. Independent claim 9 according to the third auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:

displaying (S721) in a display unit (390) of a video device (300) for controlling the home network devices a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;

receiving a first image containing the plurality of controlled devices (400,500,600), the video device (300), the device list displayed in the display unit (390) of the video device (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;

mapping the controlled device and an item corresponding to the controlled device in the device list according to the light information detected in the received first image,

displaying (S711) a mesh pattern having a color in the display unit (390) of the video device (300) corresponding to a display area;

receiving (S712) a second image containing the video device (300) and the mesh pattern displayed in the display unit (390) thereof;

compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image;
and
setting (S714) a coordinate system corresponding to the compensated display area."

XI. Independent claim 7 according to the fourth auxiliary request reads as follows:

"A method of controlling home network devices, the method **characterized by:**
receiving a first image containing the plurality of controlled devices (400,500,600);
detecting areas of the controlled devices (400,500,600) from the first image;
displaying (S721) a device list containing items corresponding to the plurality of controlled devices (400,500,600) arranged in the predetermined space;
receiving a second image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list, wherein the light information includes a selection event turning the light on and off a predetermined number of times for a predetermined time duration; and
mapping the controlled device and an item corresponding to the controlled device in the device list according to the light information detected in the received second image, wherein the mapping comprises mapping the detected area of the controlled device in which a selection event is generated, and the item on which the selection event is generated in the device list."

XII. Independent claim 17 according to the fifth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list, wherein the light information includes an indication of an occurrence of a selection event turning the light on and off a predetermined number of times for a predetermined time duration;
detecting the selection event, and
mapping the controlled device and an item corresponding to the controlled device in the device list according to the detected selection event."

XIII. Independent claim 17 according to the sixth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list, wherein the light information includes an indication of an occurrence of

a selection event turning the light on and off a predetermined number of times for a predetermined time duration;
detecting the selection event, and
mapping the controlled device and an item corresponding to the controlled device in the device list according to the detected selection event."

XIV. Independent claim 9 according to the seventh auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
characterised by:
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; wherein the light information includes a selection event turning the light on and of [sic] a predetermined number of times for a predetermined time duration;
mapping the controlled device and an item corresponding to the controlled device in the device list according to the light information detected in the received first image,
displaying (S711) a mesh pattern having a color corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received

second image; and setting (S714) a coordinate system corresponding to the compensated display area."

XV. Independent claim 9 according to the eighth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
characterised by:
displaying (S711) a mesh pattern having a color corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting (S714) a coordinate system corresponding to the compensated display area,
generating a mapping table for mapping items displayed in the display area and coordinate values of said coordinate system,
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;
wherein a coordinate value of an area where a selection event is generated, is detected,
wherein the detected coordinate value, if included in the display area, is converted (S726) into a coordinate value corresponding to the coordinate system corresponding to the compensated display area, and a

controlled device is selected (S727) on basis of the converted coordinate with reference to said mapping table."

XVI. Independent claim 9 according to the ninth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:

characterised by:

displaying (S711) a mesh pattern having a color corresponding to a display area of a video device;
receiving (S712) a second image containing the mesh pattern and the video device;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting (S714) a coordinate system corresponding to the compensated display area,
generating a mapping table for mapping items displayed in the display area and coordinate values of said coordinate system,
displaying (S721) a device list containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
receiving a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;
wherein a coordinate value of an area where a selection event is generated, is detected,
wherein the detected coordinate value, if included in the display area, is converted (S726) into a coordinate value corresponding to the coordinate system

corresponding to the compensated display area, and a controlled device is selected (S727) on basis of the converted coordinate with reference to said mapping table."

XVII. Independent claim 12 according to the tenth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
receiving a first image containing a plurality of controlled devices (400,500,600) arranged in a predetermined space and light information on light reflected from a controlled device of the controlled devices (400,500,600);
selecting (S732) the controlled device, from which the light is reflected, according to the light information detected in the received first image;
characterised by:
displaying (S733) a control menu list of the selected controlled device,
displaying (S711) a mesh pattern having a color corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting (S714) a coordinate system corresponding to the compensated display area."

XVIII. Independent claim 12 according to the eleventh auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
receiving a first image containing a plurality of controlled devices (400,500,600) arranged in a predetermined space and light information on light reflected from a controlled device of the controlled devices (400,500,600);
selecting (S732) the controlled device, from which the light is reflected, according to the light information detected in the received first image;
characterised by:
displaying (S733) a control menu list of the selected controlled device,
displaying (S711) a mesh pattern having a color corresponding to a display area;
receiving (S712) a second image containing the mesh pattern;
compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and
setting (S714) a coordinate system corresponding to the compensated display area."

XIX. Independent claim 3 according to the twelfth auxiliary request reads as follows:

"A method of controlling home network devices, the method comprising:
characterised by:
receiving a first image containing a plurality of controlled devices (400,500,600) arranged in a predetermined space;
setting a first coordinate system for the received first image;

detecting areas of the controlled devices (400,500,600) from the received first image;

detecting coordinates of the first coordinate system included in the corresponding areas;

generating a first mapping table by mapping information on the controlled device areas detected from the received image and the detected coordinates of the first coordinate system included in the corresponding areas;

displaying (S711) a mesh pattern having a color corresponding to a display area;

receiving (S712) a second image containing the mesh pattern;

compensating (S713) a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected from the received second image; and

setting (S714) a second coordinate system corresponding to the compensated display area,

generating a second mapping table for mapping items displayed in the display area and coordinate values of said second coordinate system,

displaying (S721) in the display area a device list containing items corresponding to the plurality of controlled devices (400,500,600) arranged in the predetermined space;

receiving a third image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list;

detecting a coordinate value of an area where a selection event is generated,

wherein the detected coordinate value, if included in the display area, is converted (S726) into a coordinate value corresponding to the second coordinate system

corresponding to the compensated display area, and a controlled device is selected (S727) on basis of the converted coordinate with reference to said second mapping table; and
wherein, if the detected coordinate value is not included in the display area, a coordinate group of area containing the detected coordinate value is selected with reference to the first mapping table generating a third mapping table where a coordinate group selected in the first mapping table and a controlled device selected in the second mapping table are mapped."

XX. Independent claim 1 according to the thirteenth auxiliary request reads as follows:

"An apparatus for controlling home network devices, the apparatus comprising:

a display unit (390);
a receiving unit (310); and
a control unit (350);

characterised in that:

the display unit (390) is arranged to display a device list (3) containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;

the receiving unit (310) is arranged to receive a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; and

the control unit (350) is arranged to map the controlled device and an item corresponding to the controlled device according to the light information detected from the received first image;

wherein the display (390) displays a mesh pattern having a certain color to correspond to a display area (30) of the [sic] display unit; and the receiving unit receives a second image including the mesh pattern; and the apparatus further comprising a compensating unit (340) that compensates a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected in the received second image; and a coordinate-system-setting unit (360) that sets a coordinate system corresponding to the compensated display area."

XXI. Independent claim 1 according to the fourteenth auxiliary request reads as follows:

"An apparatus (300) for controlling home network devices, the apparatus comprising:

a display unit (390);
a receiving unit (310); and
a control unit (350);

characterised in that:

the display unit (390) is arranged to display a device list (3) therein containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
the receiving unit (310) is arranged to receive a first image containing the plurality of controlled devices (400,500,600), the device list displayed in the display unit (390) of the apparatus (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; and
the control unit (350) is arranged to map the controlled device and an item corresponding to the

controlled device according to the light information detected from the received first image;
wherein the display unit (390) displays a mesh pattern having a certain color to correspond to a display area (30) of the display unit; and
the receiving unit receives a second image including the mesh pattern; and
the apparatus (300) further comprising a compensating unit (340) that compensates a display area of the second image by comparing the mesh pattern displayed in the display area and a mesh pattern detected in the received second image;
and a coordinate-system-setting unit (360) that sets a coordinate system corresponding to the compensated display area."

XXII. Independent claim 1 according to the fifteenth auxiliary request reads as follows:

"An apparatus (300) for controlling home network devices, the apparatus comprising:

a display unit (390);
a receiving unit (310); and
a control unit (350);

characterised in that:

the display unit (390) is arranged to display a device list (3) therein containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;
the receiving unit (310) is arranged to receive a first image containing the plurality of controlled devices (400,500,600), the device list displayed in the display unit (390) of the apparatus (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; and

the control unit (350) is arranged to map the controlled device and an item corresponding to the controlled device according to the light information detected from the received first image; wherein the display unit (390) displays a mesh pattern having a certain color to correspond to a display area (30) of the display unit; and the receiving unit receives a second image including the mesh pattern; and the apparatus (300) further comprising a compensating unit (340) that compensates a display area of the second image by comparing the mesh pattern displayed in the display area and a mesh pattern detected in the received second image, and that compensates an image color of the second image by comparing a mesh data color displayed via the display unit (390) and a mesh data color detected in the received second image; and a coordinate-system-setting unit (360) that sets a coordinate system corresponding to the compensated display area."

XXIII. Independent claim 1 according to the sixteenth auxiliary request reads as follows:

"Control system for controlling home network devices, comprising a video device (300) and an image-capturing device (200), the video device (300) comprising:
a display unit (390);
a receiving unit (310); and
a control unit (350);

characterised in that:

the display unit (390) is arranged to display a device list (3) therein containing items corresponding to a plurality of controlled devices (400, 500, 600) arranged in a predetermined space;

the image-capturing device (200) is set up in order for the controlled devices and the video device (300) to be included within the photographic range;
the receiving unit (310) is arranged to receive a first image provided by the image-capturing device (200) containing the plurality of controlled devices (400,500,600), the device list displayed in the display unit (390) of the video device (300), and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; and
the control unit (350) is arranged to map the controlled device and an item corresponding to the controlled device according to the light information detected from the received first image;
wherein the display unit (390) displays a mesh pattern having a certain color to correspond to a display area (30) of the display unit; and
the receiving unit receives a second image provided by the image-capturing device (200) including the mesh pattern; and
the video device (300) further comprising a compensating unit (340) that compensates a display area of the second image by comparing the mesh pattern displayed in the display area and a mesh pattern detected in the received second image;
and a coordinate-system-setting unit (360) that sets a coordinate system corresponding to the compensated display area."

XXIV. Independent claim 1 according to the seventeenth auxiliary request reads as follows:

"An apparatus for controlling home network devices, the apparatus comprising:
a display unit (390);

a receiving unit (310); and
a control unit (350);

characterised in that:

the display unit (390) is arranged to display a device list (3) containing items corresponding to a plurality of controlled devices (400,500,600) arranged in a predetermined space;

the receiving unit (310) is arranged to receive a first image containing the plurality of controlled devices (400,500,600), the device list, and light information on light reflected from a controlled device of the plurality of controlled devices (400,500,600) and the device list; wherein the light information includes a selection event turning the light on and of [sic] a predetermined number of times for a predetermined time duration; and in that

the control unit (350) is arranged to map the controlled device and an item corresponding to the controlled device according to the light information detected from the received first image;

wherein the display (390) displays a mesh pattern having a certain color to correspond to a display area (30) of the [sic] display unit; and

the receiving unit receives a second image including the mesh pattern; and

the apparatus further comprising a compensating unit (340) that compensates a display area of the second image by comparing the mesh pattern displayed on the display area and a mesh pattern detected in the received second image;

and a coordinate-system-setting unit (360) that sets a coordinate system corresponding to the compensated display area."

XXV. Oral proceedings were held on 8 October 2014 in the absence of the appellant. After due deliberation on the

basis of the written submissions, the board announced its decision.

Reasons for the Decision

1. Admissibility

The appeal complies with Articles 106 to 108 EPC (see Facts and Submissions, point II above). It is therefore admissible.

2. Non-attendance at oral proceedings

By letter dated 06 October 2014 the board was informed that the appellant would not be attending the oral proceedings. The board nonetheless considered it expedient to maintain the date set for oral proceedings. Nobody attended on behalf of the appellant.

Article 15(3) RPBA stipulates that the board is not obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case.

Hence, the board was in a position to announce a decision at the end of the oral proceedings.

Main request

3. Article 123(2) EPC - Amendments

The order of receiving the first image and the second image is not supported. Either claim 9 as a method has to be interpreted to the effect that the order of the

steps corresponds to the logical order. In this case the calibration would take place after the mapping - which is in contrast to the disclosure of the application. Or there is no order of the method steps in claim 9, but then the claimed subject-matter would still comprise that the calibration can take place after the mapping - for which the skilled person does not find a direct and unambiguous disclosure.

The same reasoning applies *mutatis mutandis* to independent method claim 12.

The appellant did not address this issue, which was raised in the communication of the board, in the further proceedings.

The board therefore judges that the requirements of Article 123(2) EPC are not fulfilled.

3.1 The same reasoning applies *mutatis mutandis* to the corresponding claims of the first to third and seventh auxiliary requests.

4. Article 84 EPC - Clarity

For the same reason it is not clear how the invention can be performed if the calibration takes place after the mapping.

Furthermore, it is unclear how the step of receiving a first image containing the plurality of controlled devices, the device list, and light information on light reflected from a controlled device of the plurality of controlled devices and the device list can be performed. It is not possible to receive an image showing the plurality of controlled devices and the

device list at the same time, at least not the complete plurality of controlled devices, when the device list is superimposed.

In addition, it is not clear how light information on light reflected from a controlled device of the plurality of controlled devices and light information on light reflected from the device list can be contained. When using a laser pointer, which is the preferred embodiment disclosed, there is only a single point of light reflected in the image which is either on the controlled device or on an item of the device list.

The same reasoning applies *mutatis mutandis* to independent method claim 12.

The appellant did also not address this issue in the further proceedings although it was mentioned in the communication accompanying the summons to oral proceedings.

The requirements of Article 84 EPC are therefore not fulfilled.

4.1 The same reasoning applies *mutatis mutandis* to the corresponding claims of the first to third and seventh auxiliary requests.

5. Article 56 EPC - Inventive step

D1 is considered to be the closest prior art which discloses a method of controlling home network devices. It discloses

displaying textual information containing items of a menu corresponding to a plurality of controlled devices arranged in a predetermined space (see e.g. [0149] menu);
receiving a first image containing the plurality of controlled devices, the textual information, and light information on light reflected from a controlled device of the plurality of controlled devices and the textual information (see [0072]);
mapping the controlled device and an item corresponding to the controlled device according to the light information detected in the received first image (see [0073] to [0077], in particular apparatus recognition range and conversion table for coordinate conversion for converting the camera coordinate system to a correct coordinate system),
displaying a reference frame having a color corresponding to a display area (see [0090]);
receiving a second image containing the reference frame;
compensating a display area of the second image by comparing the reference frame displayed on the display area and a reference frame detected from the received second image (see [0090]); and
setting a coordinate system corresponding to the compensated display area (see in particular [0090] and [0091]).

- 5.1 The subject-matter of claim 9 therefore differs from the teaching of D1 in
- a) displaying a device list instead of textual information in general and
 - b) displaying a mesh pattern instead of a reference frame.

5.2 In the board's view, distinguishing features a) and b) solve different partial problems.

5.3 The objective technical problem underlying feature a) is considered to be the selection of an item to be controlled.

In view of D1 already disclosing the use of textual information related to the devices to be controlled, the board considers it to be obvious for a person skilled in the art to display such information in the form of a device list according to feature a), particularly in order to give the user an alternative way of selecting a device instead of directly pointing to the device to be controlled. The board does not see any technical hurdle to be overcome or any technical advantage achieved which would involve the need of inventive skills for this.

The solution according to feature a) is therefore considered to be obvious in view of D1 and the skilled person's common general knowledge.

5.4 The objective technical problem underlying feature b) is considered to be a calibration of the coordinate system.

D1 discloses to use a reference frame for the same purpose as the mesh pattern is used according to claim 9. The disclosure of the present application does not appear to disclose particular advantages of using a mesh pattern instead of other geometrical reference patterns. Indeed, the application teaches that the use of a mesh pattern is only one of various other possible patterns (see [0041]). The skilled person looking for an alternative pattern to be used for calibration would

also consider D3 or D4, which both also deal with calibration of interactive display systems.

D3 discloses that many patterns exist for this purpose including grids, lines or polygons (see D3, page 4, line 29 and 30). Grids are considered by the board to be at least equivalent to a mesh pattern according to feature b), which is therefore regarded as obvious with regard to a combination of D1 and D3.

D4 discloses (see [0026]) that "control system 30 may be calibrated by using processing section 35 to correlate the image elements and positional coordinates of presentation image 13 to the corresponding elements and coordinates comprising initial electronic image 22a resident in display computer 21. This may be done, for example, by, i) generating an embedded predetermined pattern (not shown) in projection image 29, ii) acquiring presentation image 13, including the embedded pattern, by means of electronic camera 31, iii) detecting the predetermined pattern and establishing relevant positional coordinates within the image acquired by electronic camera 31, and iv) analyzing the pattern coordinates to mathematically correlate the coordinates of presentation image 13 to the coordinates of initial electronic image 22a." The additional feature of claim 9 is therefore considered to be at least rendered obvious by D4.

- 5.5 Even if these features work together in the claimed method, as argued by the appellant, for assessing inventive step it has to be examined what is the respective technical effect. The board does not see a combinative technical effect going beyond the sum of the respective technical effects of feature a) or feature b). Therefore the subject-matter of claim 9 is

regarded as a mere juxtaposition of aggregated features which are each obvious.

5.6 The same reasoning applies *mutatis mutandis* to independent method claim 12. Particularly, D1 discloses displaying a menu according to the first feature of the characterizing portion of claim 12 (see D1, figure 26A and [0149]).

5.7 The subject-matter of independent claims 9 and 12 hence does not involve an inventive step over the disclosure of D1 when combined with D3 or with D4 in the light of the skilled person's common general knowledge.

First auxiliary request

6. Independent method claim 9 of this request comprises the additional feature "displaying (S721) in a display unit (390) of an apparatus (300) for controlling the home network devices a device list".

6.1 Besides the above objections under Articles 84 and 123(2) EPC (see points 3.1 and 4.1), the subject-matter of claim 9 of this request also lacks an inventive step (Article 56 EPC).

6.2 D1 already discloses the possibility of using the display area of a video device for the purpose of displaying information of the devices to be controlled (see e.g. [0012] where it is disclosed that a TV display has been used for this purpose in the past). The advantages and disadvantages of using a video display and of using a projected image on the wall appear to be evident to the skilled person. The present application does not provide any disclosure that the appellant has found out further surprising technical

effects or benefits caused by the use of the display of a video device which were previously unknown. Neither has the appellant presented any argument in this respect. The added feature therefore does not involve an inventive step.

Second auxiliary request

7. Independent method claim 9 of this request comprises the additional feature "compensating an image color of the second image by comparing a mesh data color displayed via the display unit (390) and a mesh data color detected in the received second image". This is regarded as a further aggregated feature solving the problem of color compensation.
- 7.1 Besides the above objections under Articles 84 and 123(2) EPC (see points 3.1 and 4.1), the subject-matter of claim 9 of this request also lacks an inventive step (Article 56 EPC).
- 7.2 D4 discloses (see [0027]) "The color balance of presentation image 13 is optimized with image projector 23 projecting a standardized color calibration chart (not shown) onto projection screen 12, and comparing the values of the projected colors, as acquired by electronic camera 31, with the known values for the chart colors. From the comparison results, processing section 35 determines the color corrections to be made and adjusts presentation image 13 accordingly". The additional feature of claim 9 is therefore considered to be at least rendered obvious by D4 in juxtaposition to the other features which are obvious for the reasons set out above.

Third auxiliary request

8. Independent method claim 9 of this request corresponds to claim 9 according to the first auxiliary request and, hence, besides the above objections under Articles 84 and 123(2) EPC (see points 3.1 and 4.1), is obvious for the same reasons as set out above (see point 6).

Fourth auxiliary request

9. All the features of claim 7 of this request except for "detecting areas of the controlled devices from the first image"; ... "wherein the light information includes a selection event turning the light on and off a predetermined number of times for a predetermined time duration" ... and ... "wherein the mapping comprises mapping the detected area of the controlled device in which a selection event is generated, and the item on which the selection event is generated in the device list" essentially correspond to claim 9 according to the main request.
 - 9.1 The reasoning with regard to the disclosure of D1 in point 5 above therefore applies *mutatis mutandis* to present claim 7. With regard to the afore-mentioned added steps of detecting areas of the controlled device and their mapping, D1 also discloses to select a device and to map a detected area of a controlled device (see D1, arrangement information and conversion table for coordinates conversion, [0072] to [0077] as well as figure 7, especially calibration data 3C1). In particular, the apparatus recognition ranges AR in D1 are considered to correspond to detected areas of a controlled device according to claim 7 (see e.g. D1, [0072]).

- 9.2 The objective technical problem underlying the remaining distinguishing feature of the light information including a selection event turning the light on and off a predetermined number of times for a predetermined time duration is considered to be to generate information for selecting a device to be controlled.
- 9.3 Document D2 was mentioned in the decision under appeal for the sake of information. It was, however, not part of the decision. The appellant did not take this prior art into consideration in the statement setting out the grounds of appeal. The decision under appeal stated that an additional search was necessary for the feature added with the fourth auxiliary request on which the decision under appeal is based and which corresponds to the present fourth auxiliary request. The board therefore took D2 into consideration for the appeal proceedings according to Article 114(1) EPC.
- 9.4 D2 discloses the use of a laser pointer which emits light intermittently (see [0031] "laser pointer 104 on remote control 103 emits light only intermittently, blinking on and off repeatedly. This blinking or toggling of light spot 504 provides a recognizable "beacon" that the camera can distinguish from features in the scene"). For this purpose, a series of subsequent images is captured and analysed.

The solution according to the distinguishing feature is therefore obvious with regard to the teaching of D2. The subject-matter of claim 7 hence lacks an inventive step over D1 combined with D2.

Fifth auxiliary request

10. All features of claim 17 of this request essentially correspond to claim 9 according to the main request. The reasoning with regard to the disclosure of D1 in point 5 above therefore applies *mutatis mutandis* to present claim 17. In particular, D1 also discloses selecting a device and mapping a detected area of a controlled device (see D1, arrangement information and conversion table for coordinates conversion, [0072] to [0077] as well as figure 7, especially calibration data 3C1). Independent method claims 17 and 21 of this request essentially correspond to claim 7 according to the fourth auxiliary request and, hence, are considered to be obvious for the same reasons as set out above (see points 9 to 9.4).
- 10.1 The objective technical problem underlying the distinguishing feature of the light information including a selection event turning the light on and off a predetermined number of times for a predetermined time duration is considered to be to generate information for selecting a device to be controlled.
- 10.2 Document D2 was mentioned in the decision under appeal for the sake of information. It was, however, not part of the decision. The appellant did not take this prior art into consideration in the statement setting out the grounds of appeal. The decision under appeal stated that an additional search was necessary for the feature added with the fourth auxiliary request on which the decision under appeal is based and which corresponds to the present fourth auxiliary request. The board therefore took D2 into consideration for the appeal proceedings according to Article 114(1) EPC.

- 10.3 D2 discloses the use of a laser pointer which emits light intermittently (see [0031] "laser pointer 104 on remote control 103 emits light only intermittently, blinking on and off repeatedly. This blinking or toggling of light spot 504 provides a recognizable "beacon" that the camera can distinguish from features in the scene"). For this purpose, a series of subsequent images is captured and analysed. D2 also discloses detecting a selection event (see D2, [0031]).

The solution according to the distinguishing feature is therefore obvious with regard to the teaching of D2. The subject-matter of claim 17 hence lacks an inventive step over D1 combined with D2.

- 10.4 The same reasoning applies *mutatis mutandis* to independent method claim 21. The board notes that D1 discloses displaying a menu according to the last feature of claim 21 (see D1, figure 26A and [0149]).

Sixth auxiliary request

11. Independent method claims 17 and 21 of this request essentially correspond to claims 17 and 21 according to the fifth auxiliary request and, hence, are considered to be obvious for the same reasons as set out above (see points 10 to 10.4).

Seventh auxiliary request

12. The above objections under Articles 84 and 123(2) EPC notwithstanding (see points 3.1 and 4.1), claim 9 of this request comprises the distinguishing feature identified in point 9 above in addition to the features of claim 9 according to the main request. This feature

therefore solves another partial problem (see the problem as set out in point 9.2 above).

12.1 The additional feature is rendered obvious by D2 for the reasons given above (see points 9.3 to 9.4), in juxtaposition to the other features which are obvious for the reasons set out with regard to the main request.

12.2 The same reasoning applies *mutatis mutandis* to independent method claim 12.

Eighth auxiliary request

13. Independent method claim 9 of this request essentially corresponds to claim 9 according to the main request and, hence, is considered to be obvious for the same reasons as set out above with regard to the main request.

Ninth auxiliary request

14. Independent method claim 9 of this request is identical to claim 9 of previous ninth auxiliary request underlying the assessment in the board's communication, and corresponds to claim 9 according to the first auxiliary request. It is therefore considered to be obvious for the same reasons as set out above (see point 6).

Tenth auxiliary request

15. Independent method claim 9 of this request corresponds to claim 9 according to the second auxiliary request and, hence, is considered to be obvious for the same reasons as set out above (see point 7).

- 15.1 Independent method claim 12 of this request essentially corresponds to claim 12 according to the main request and, hence, is considered to be obvious for the same reasons as set out above with regard to the main request.

Eleventh auxiliary request

16. Independent method claim 9 of this request corresponds to claim 9 according to the seventh auxiliary request and, hence, is considered to be obvious for the same reasons as set out above (see points 9 and 12 above).
- 16.1 Independent method claim 12 of this request essentially corresponds to claim 12 according to the main request and, hence, is obvious for the same reasons as set out above with regard to the main request.

Twelfth auxiliary request

17. Independent method claim 3 of this request adds, *inter alia*, the following feature
"wherein, if the detected coordinate value is not included in the display area, a coordinate group of area containing the detected coordinate value is selected with reference to the first mapping table generating a third mapping table where a coordinate group selected in the first mapping table and a controlled device selected in the second mapping table are mapped" to the corresponding claim 9 of the eighth auxiliary request.
- 17.1 In the annex to the summons the appellant was informed (see last paragraph of the annex) that if amendments to its case were filed it would be necessary at the oral

proceedings to discuss their admissibility and their compliance with the EPC, including Articles 123(2), 84 and 52(1).

- 17.2 The afore-mentioned feature was taken from the description and claimed for the first time after the summons to oral proceedings, i.e. late in the appeal proceedings, in contrast to the requirements of Article 12(2) and (4) RPBA. By not attending the oral proceedings, the appellant did not give the board an opportunity to discuss this subject-matter in substance. The board notes that this feature raises several new problems regarding clarity (Article 84 EPC) and inventive step (Article 56 EPC) which could not be dealt with properly in the absence of the appellant.
- 17.3 In particular, it is not clear whether the step of generating a third mapping table takes place only if the detected coordinate value is not included in the display area, as it appears from the wording of the feature.
- 17.4 Furthermore, the appellant did not substantiate why and how this feature contributes to an inventive step. It was merely provided without further argument on the merits of this feature.
- 17.5 In view of the complexity of the new subject-matter of this feature without proper substantiation of the amendment and in the absence of the appellant, the board did not admit this request into the proceedings in accordance with Articles 12(4) and 13(1) and (3) RPBA.

Thirteenth auxiliary request

18. Claim 1 of this request is an independent apparatus claim corresponding to independent claim 9 according to the main request.

18.1 Claim 1 comprises an apparatus-like feature which suffers from the same deficiencies as argued in detail in point 4 above. It is not clear how light information on light reflected from a controlled device of the plurality of controlled devices and light information on light reflected from the device list can be contained in the image received by the receiving unit. When using a laser pointer, which is the preferred embodiment disclosed, there is only a single point of light reflected in the image which is either on the controlled device or on an item of the device list.

The appellant did also not address this issue in the further proceedings.

The requirements of Article 84 EPC are therefore not fulfilled.

18.2 In the annex to the summons for oral proceedings the board noted that the main request and all of the auxiliary requests comprised independent apparatus claims corresponding to the independent method claims. The board noted that the objections in respect of inventive step applied *mutatis mutandis* to the independent apparatus claims. In particular D1, D3 and D4 also disclose means corresponding to the method features (see e.g. D1, figures 1 and 3 with corresponding text of the description).

The appellant did not provide convincing arguments to the contrary. The board therefore judges that claim 1 of this request lacks an inventive step for the same reasons as set out in point 5 above with regard to the main request.

Fourteenth auxiliary request

19. Claim 1 of this request is an independent apparatus claim corresponding to independent claim 9 according to the first auxiliary request.

The requirements of Articles 56 and 84 EPC are therefore not fulfilled for the same reasons as set out in points 4 to 6 and 18.

Fifteenth auxiliary request

20. Claim 1 of this request is an independent apparatus claim corresponding to independent claim 9 according to the second auxiliary request.

The requirements of Articles 56 and 84 EPC are therefore not fulfilled for the same reasons as set out in points 4 to 7 and 18.

Sixteenth auxiliary request

21. Claim 1 of this request is an independent apparatus claim corresponding to independent claim 9 according to the third auxiliary request.

The requirements of Articles 56 and 84 EPC are therefore not fulfilled for the same reasons as set out in points 4 to 8 and 18.

Seventeenth auxiliary request

22. Claim 1 of this request is an independent apparatus claim corresponding to independent claim 9 according to the seventh auxiliary request.
- 22.1 The requirements of Articles 56 and 84 EPC are therefore not fulfilled for the same reasons as set out in points 4 to 6, 9, 12 and 18.
23. The board notes that the appellant's letter of 8 September 2014 refers to "Additional thirteenth to twentieth auxiliary requests" (cf. page 10, line 4). However, this line is considered to be a title of the following section which indicates that additional sets of claims are filed herewith as thirteenth to seventeenth auxiliary requests. Further, the introductory paragraph on page 1 of the letter does not refer to auxiliary requests 18 to 20. Only sets of claims of the fourth, ninth, twelfth, thirteenth, fourteenth, fifteenth, sixteenth and seventeenth auxiliary requests were enclosed with the letter dated 8 September 2014. The board considers that "twentieth" was introduced in the title on page 10 due to a clerical error and that it should be read as "seventeenth".

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated