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(81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW。

(84) 指定国(除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT,

[见续页]

(54) Title: METHOD, DEVICE, AND SYSTEM FOR HIGHLIGHTING PARTY OF INTEREST

(54) 发明名称: 视频会议中突显关注者的方法、设备及系统

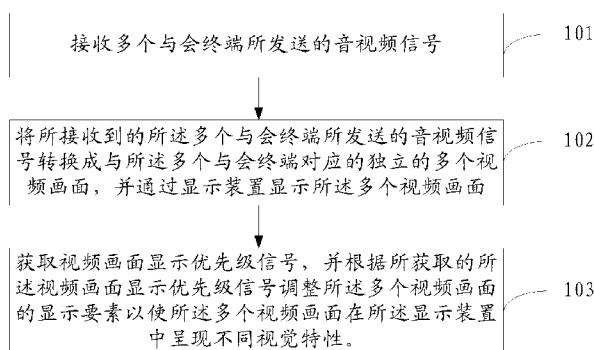


图 1 / FIG. 1

101 AUDIO AND VIDEO SIGNALS TRANSMITTED BY MULTIPLE CONFERENCE-PARTICIPATING TERMINALS ARE RECEIVED
102 AUDIO AND VIDEO SIGNALS RECEIVED FROM MULTIPLE CONFERENCE-PARTICIPATING TERMINALS ARE CONVERTED TO MULTIPLE INDEPENDENT VIDEO IMAGES CORRESPONDING TO CONFERENCE-PARTICIPATING TERMINALS, AND MULTIPLE VIDEO IMAGES ARE DISPLAYED BY MEANS OF DISPLAY DEVICE
103 DISPLAY PRIORITY SIGNALS FOR VIDEO IMAGES ARE ACQUIRED, AND DISPLAY FACTORS OF MULTIPLE VIDEO IMAGES ARE ADJUSTED ACCORDING TO ACQUIRED DISPLAY PRIORITY SIGNALS FOR VIDEO IMAGES, SO THAT MULTIPLE VIDEO IMAGES PRESENT DIFFERENT VISUAL CHARACTERISTICS ON DISPLAY DEVICE

(57) Abstract: Embodiments of the present invention relate to the field of telecommunication, and provide a method, device, and system for highlighting a party of interest in video conferencing. The present invention effectively utilizes network bandwidth and enhances conference efficiency. The method comprises: audio and video signals received from multiple conference-participating terminals are converted to multiple independent video images corresponding to the multiple conference-participating terminals, and the multiple video images are displayed by means of a display device; and the display factors of the multiple video images are adjusted according to acquired display priority signals for the video images, so that the multiple video images present different visual characteristics on the display device. Embodiments of the present invention are applicable to video conferencing.

(57) 摘要: 本发明实施例提供了一种视频会议中突显关注者的方法、设备及系统, 涉及通信领域, 可以有效利用网络带宽, 提高会议效率。所述方法包括: 将接收到的多个与会终端所发送的音视频信号转换成与所述多个与会终端对应的独立的多个视频画面, 并通过显示装置显示所述多个视频画面; 并根据获取到的视频画面显示优先级信号调整所述多个视频画面的显示要素以使所述多个视频画面在所述显示装置中呈现不同视觉特性。本发明实施例应用于视频会议。



RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)。

- 在修改权利要求的期限届满之前进行，在收到该修改后将重新公布(细则 48.2(h))。
- 根据申请人的请求，在条约第 21 条(2)(a)所规定的期限届满之前进行。

本国际公布：

— 包括国际检索报告(条约第 21 条(3))。

(88) 国际检索报告公布日期:

2013 年 2 月 21 日

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/072077

A. CLASSIFICATION OF SUBJECT MATTER

H04N7/15(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

VEN, CNABS: video meeting, video conference, user, participant, participator, select, input, apparent, protruding, obvious, outstanding, pop up, display, menu, UI, magnify, blow, zoom, center, front

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN101080000A (HUAWEI TECHNOLOGIES CO LTD) 28 November 2007(28.11.2007) see description, page 3, line 16-page 6, line 27; figures 3-7	1-2, 4, 9-10, 12, 15
Y	See description, page 3, line 16-page 6, line 27; figures 3-7	3, 5-8, 11, 13-14, 16-17
Y	CN102025970A (GUANGDONG WEICHUANG SHIXUN TECHNOLOGY CO) 20 April 2011(20.04.2011) see description, paragraphs 0003; figures 3-4	3, 5-8, 11, 13-14, 16-17
A	CN1541485A (KONINKL PHILIPS ELECTRONICS NV) 27 October 2004(27.10.2004) the whole document	1-17
A	US2005099492A1 (ATI TECHNOLOGIES INC) 12 May 2005(12.05.2005) the whole document	1-17

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
“A” document defining the general state of the art which is not considered to be of particular relevance	“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
“E” earlier application or patent but published on or after the international filing date	“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	“&” document member of the same patent family
“O” document referring to an oral disclosure, use, exhibition or other means	
“P” document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
28 November 2012(28.11.2012)

Date of mailing of the international search report
13 December 2012(13.12.2012)

Name and mailing address of the ISA
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Authorized officer
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2012/072077

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN101080000A	28.11.20007	NONE	
CN102025970A	20.04.2011	NONE	
CN1541485A	27.10.2004	CN100499830C JP4198054B2 EP1433335B1 DE60237834D1 EP1433335A1 US7825948B2 US2003035001A1 WO03017680A1 KR20040030081A JP2005500757T	10.06.2009 17.12.2008 29.09.2010 11.11.2010 30.06.2004 02.11.2010 20.02.2003 27.02.2003 08.04.2004 06.01.2005
US2005099492A1	12.05.2005	NONE	

A. 主题的分类

H04N7/15(2006.01)i

按照国际专利分类(IPC)或者同时按照国家分类和 IPC 两种分类

B. 检索领域

检索的最低限度文献(标明分类系统和分类号)

IPC: H04N

包含在检索领域中的除最低限度文献以外的检索文献

在国际检索时查阅的电子数据库(数据库的名称, 和使用的检索词(如使用))

VEN: video meeting, video conference, user, participant, participator, select, input, apparent, protruding, obvious, outstanding, pop up, display, menu, UI, magnify, blow, zoom, center, front CNABS: 视频会议, 突显, 凸显, 突出, 用户, 选择, 输入, 点击, 用户, 使用者, 与会者, 显示, 位置, 放大, 居中, 前方, 前部, 画面, 屏幕, 3D, 立体, 三维, 虚拟

C. 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求
X	CN101080000A (华为技术有限公司) 28.11 月 2007 (28.11.20007) 说明书第 3 页第 16 行-第 6 页第 27 行, 附图 3-7	1-2, 4, 9-10, 12, 15
Y	说明书第 3 页第 16 行-第 6 页第 27 行, 附图 3-7	3, 5-8, 11, 13-14, 16-17
Y	CN102025970A (广东威创视讯科技股份有限公司) 20.4 月 2011 (20.04.2011) 说明书第 0003 段, 附图 3-4	3, 5-8, 11, 13-14, 16-17
A	CN1541485A (皇家飞利浦电子股份有限公司) 27.10 月 2004 (27.10.2004) 全文	1-17
A	US2005099492A1 (ATI 技术公司) 12.5 月 2005 (12.05.2005) 全文	1-17

 其余文件在 C 栏的续页中列出。 见同族专利附件。

* 引用文件的具体类型:

“A” 认为不特别相关的表示了现有技术一般状态的文件

“E” 在国际申请日的当天或之后公布的在先申请或专利

“L” 可能对优先权要求构成怀疑的文件, 或为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件(如具体说明的)

“O” 涉及口头公开、使用、展览或其他方式公开的文件

“P” 公布日先于国际申请日但迟于所要求的优先权日的文件

“T” 在申请日或优先权日之后公布, 与申请不相抵触, 但为了理解发明之理论或原理的在后文件

“X” 特别相关的文件, 单独考虑该文件, 认定要求保护的发明不是新颖的或不具有创造性

“Y” 特别相关的文件, 当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时, 要求保护的发明不具有创造性

“&” 同族专利的文件

国际检索实际完成的日期 28.11 月 2012 (28.11.2012)	国际检索报告邮寄日期 13.12 月 2012 (13.12.2012)
ISA/CN 的名称和邮寄地址: 中华人民共和国国家知识产权局 中国北京市海淀区蓟门桥西土城路 6 号 100088 传真号: (86-10)62019451	受权官员 张冰青 电话号码: (86-10) 62411502

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2012/072077

检索报告中引用的专利文件	公布日期	同族专利	公布日期
CN101080000A	28.11.20007	无	
CN102025970A	20.04.2011	无	
CN1541485A	27.10.2004	CN100499830C JP4198054B2 EP1433335B1 DE60237834D1 EP1433335A1 US7825948B2 US2003035001A1 WO03017680A1 KR20040030081A JP2005500757T	10.06.2009 17.12.2008 29.09.2010 11.11.2010 30.06.2004 02.11.2010 20.02.2003 27.02.2003 08.04.2004 06.01.2005
US2005099492A1	12.05.2005	无	