User-Defined Game Control with Smart Glasses in Public Space

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ABSTRACT

Without specific game controller and direct-touch, game control on Smart Glasses differs with existing console and mobile games. Although current game control set on Smart Glasses is explored by developers based on system limitation, the set is not reflective of user behavior. To create better game control, we presented an user-defined game control study in public space to collect user behavior. In all, 2448 game controls from 24 participants were logged, analyzed, and paired with think-aloud data for 17 commands performed with 3 interaction methods (On-Body, In-Air and Phone) and 2 glasses forms (Google Glass and Epson BT-100). Our findings indicate that users choose area relatively unobtrusive to perform the game control, and glasses form does influence how users creates game control. We also present a complete user-defined game control set with agreement scores and taxonomy. Our results will help designers create better game control sets informed by user behavior.

Author Keywords

Guides; instructions; author's kit; conference publications; keywords should be separated by a semi-colon.
Optional section to be included in your final version, but strongly encouraged.

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

See: `http://www.acm.org/about/class/1998/` for more information and the full list of ACM classifiers and descriptors.
Optional section to be included in your final version, but strongly encouraged. On the submission page only the classifiers letter-number combination will need to be entered.

#	Description	Used in Famous Game
1	Single select	
2	Vertical menu selection	
3	Horizontal menu selection	
4	Move left and right	
5	Move in 4 directions	
6	Switch 2 objects	
7	Move object to position	
8	Draw a path	
9	Throw an object (in-2D)	
10	Note highway	
11	Rotate an object (Z-axis)	
12	Rotate an object (Y-axis)	
13	Avatar jump	
14	Avatar 3D move	
15	Avatar attack	
16	Avatar squat	
17	3D Viewport control	

Table 1. Summary of our general casual game task set.

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