基于分布式认知理论的扩展资源模型

王常青, 邓昌智, 马翠霞, 华庆一, 戴国忠

王常青1, 邓昌智1, 马翠霞1, 华庆一2, 戴国忠1
1(中国科学院 软件研究所,北京 100080)
2(西北大学 计算机系,陕西 西安 710069)
作者简介: 王常青(1978－),男,博士生,山东青岛人,主要研究领域为人机交互,界面评估,分布式认知;邓昌智(1978－),男,博士生,主要研究领域为人机交互,个人信息管理;马翠霞(1975－),女,博士,主要研究领域为人机交互;华庆一(1956－),男,教授,博士生导师,CCF高级会员,主要研究领域为人机交互概念建模;戴国忠(1944－),男,研究员,博士生导师,CCF高级会员,主要研究领域为人机交互,计算机图形学.
联系人: 王常青 Phn: +86-10-62561624 ext 8013, E-mail: wcq@iel.iscas.ac.cn, http://www.iscas.ac.cn

Abstract
Distributed cognition theory plays a role of instructor in Human-Computer Interaction research by coordinating interaction between human and computer and combining advantages of them. Though Resources Model based on distributed cognition theory has been successfully employed for analyzing human computer interaction, the model, to some extent, leads to confusion in the representative forms because of the absence of support to complex user tasks and correct definitions of elements. Therefore, an extended resources model (ERM) is constructed by using distributed cognition theory to connect actions with representations in Human-Computer Interaction and to guide the design and realization of interfaces. The Extended Resources Model supports actions with static constructions and interactive strategies so as to decrease human cognitive burdens of interaction. This work will be beneficial to designing interfaces according to human's cognitive characteristics.

摘要
分布式认知理论通过协调人机对话,结合人和计算机各自的优势解决问题,在人机交互研究中扮演了指导者的角色.尽管分布式认知理论支持的资源模型在分析人机交互时取得了成功,但模型存在不能提供复杂用户任务支持、缺乏模型中元素的准确定义等问题,在一定程度上导致了表现形式上的混乱.使用分布式认知理论构造了扩展资源模型,建立人机交互活动中的动作和表征之间的联系,从而指导界面的设计和实现.扩展资源模型从静态结构和交互策略两个方面对界面交互动作提供支持,在交互中减少人的认知负担.该研究对设计符合人的认知特点的界面具有一定的指导作用.

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