

Introduction to the Mini-Track Shareable Mashups, Widgets, Composites, and Object-Oriented GUIs— Task Effectiveness and User Composing in Collaborative Software

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Modern computing can support interaction and collaboration outside the traditional paradigms of application- and task-oriented software. Past attempts at a non-application based paradigm included Smalltalk and IBM Common User Access (CUA); both presented functionality as objects to users and developers. Limits of personal computing power and market forces continued the packaging of user software as applications. But current trends in computing now allow exploring optimal organizations of software for the empowerment of diverse users. Mobile app stores provide application-centric functionality. Mashups and widgets allow creating composite displays. An object-oriented, composable user interface allows users to compose user objects in any combinations they like. Mashups, widgets, composites and object-oriented GUIs all allow unprecedented degrees of collaboration with fine-grained control at the widget/object level. With computing opening up to more users with varying needs, using ever increasing and diverse numbers and types of devices, what interaction and collaboration paradigms will best serve users?

The paper *A Cloud-based Repository for Collaborative Development of Active Web Content* (Lincke, Krahn, Röder, Ingalls, & Hirschfeld), describes the Lively Kernel as a browser-based environment for authoring

active Web content entirely in the cloud, using a “Parts Bin” metaphor for organizing the content, and an incremental scripting metaphor for making active connections between components.

Collaboration in Context: From the Desktop to the Cloud (Vegeña) examines the shifts that moving software on-line cause in user productivity and collaboration, using as an example the specific online application, Zoho Notebook.

Shareable Technology Mash-up for Situation Awareness in Catastrophic Events (Osatuyi, Ding, & Chumer) describes the use of a shareable mash-up of technologies to create situation awareness and to facilitate coordination among public and private responding agencies during a national emergency simulation.

Putting the Users in Charge: A Collaborative, User Composable Interface for NASA's Mission Control (Trimble, Dayton, & Quinol), introduces the Mission Control Technologies software that empowers users by replacing applications with shareable compositions of fine-grained user objects.

User-Driven Collaboration in NASA Mission Control (Webster, Shi, Blumenberg, Smith, Lin, Hong, & Tran) further describes that Mission Control Technologies software's architecture, and how it supports high availability, rapid composition and certification of displays, and collaboration.