

# Collaborative Live Multimedia Surface Interaction

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## Abstract

This poster presents the construction of an interactive prototype for collaborative live multimedia performances whose purpose is to explore “surface interaction” in practice. The prototype is currently being field-tested. Collaborating laptop musicians and video artists use the prototype in real performance situations using monophonic touch screen or keyboard-and-mouse. The driving vision is that information content is the base for all interaction between users and the systems. I call this concept content-centric interaction. Users conduct their activities in an unbroken creative flow. The computer is a surface onto which all the users’ information content is visualised; the surface can extend to infinity like a magic paper. Surface interaction permits content-centric computing, where content of different data types is moulded into blended media. Longitudinal studies of the prototype requires usable features for collaborative music and video live performances delivered by robust technology. The prototype utilises for example OpenGL for all graphics, operating system services were provided by SDL (Simple DirectMedia Layer), and RakNet was used to develop realtime multiuser collaboration services. The game development community’s technologies were applicable in creating a non-generic interaction artefact. Surface interaction is well suited for exploring novel interaction techniques, for instance gesture control and multi-touch displays, and is quickly emerging from a concept to usable tools and systems.