

Constellation: A Musical Exploration of Phone-Based Audience Interaction Roles

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ABSTRACT

Constellation designs various relationships between audience and performers by using mobile devices to empower communication during a performance. We direct audience members to a website, which changes throughout the piece and controls the interaction among the performers and audience. We explore several paradigms of interaction, using them as movements of a larger piece. (1) We first explore audience members producing a soundscape using their own actions, through a mobile visual interface that encourages motion, and produces sounds such as bells and controlled noise. (2) We then allow the audience to control onstage performers, through an interface by which an audience can vote on projected notes that performers attempt to follow. This can easily be adjusted to be synthesized sounds without performers. (3) A final paradigm of interaction is of performers directly controlling the audience, using instrumentation that echoes out through the phones of the performers. We move throughout three different sections of the piece, exploring these different interactions and blending them together musically. *Constellation* was designed and built with the target of performance in an April 2015 concert with the Princeton Laptop Orchestra (PLOrk), with source material from medieval piece “Stella Splendens”. *Constellation* uses primarily uses socket.io, node.js, WebAudio, and Full Tilt.

WEB LINKS

Video of performance at Princeton University on April 22, 2015 with the Princeton Laptop Orchestra: <https://vimeo.com/126996846>

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