Abstract

MOBILE PHONES, GROUP IMPROVISATION, AND MUSIC: TRENDS IN DIGITAL

SOCIALIZED MUSIC-MAKING

by

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With the advent of the smartphone, the mobile phone has recently emerged as a popular choice for instrument designers. Mobile phones are computationally powerful, feature a rich suite of onboard sensors, have ever-increasing networking capabilities, are becoming easier to program, and are above all ubiquitous. Because of these factors and a solid marketplace for dissemination, designers have authored hundreds of musical instrument apps, steadily reaching public consciousness. As ubiquitous, handheld, networked instruments, mobile phones have properties that distinguish themselves from other digital musical instruments, and are uniquely positioned to have widespread cultural impact on how people make and share music. Still, the flexibility of configuration and lack of standardization makes it difficult to define what it means to 'play' a mobile phone.

In the first three chapters I attempt to locate mobile phone music in the broader historical context of electronic music, networked music, and the considerations of digital musical instrument design. Though the nascent field of mobile music-making is still emerging, the rapid evolution of devices, software, instrumental and cultural practices associated with this trend are in need of visibility and documentation. As such, I will trace the history of mobile

phone music as it has evolved from a ringtone-based art form to the smartphone era. My goal is to highlight various creative uses of mobile phones in musical contexts, including audience participation, locative art, mobile phone ensembles, and efforts to help everyday people feel empowered to express themselves through musical creation. I will also explore whether this ideal of democratizing musicianship has downsides, and how it impacts authorship and virtuosity.

The last two chapters cover my own contribution to mobile music, including the presentation of *4Quarters*, a software-plus-controller musical instrument for mobile phones and computer. As it is designed to be fundamentally collaborative and encourage improvisation, I will document its reception by test users and participants. *4Quarters* is available as supplemental material to this written dissertation. It is accessible as a downloadable standalone application, stored as a .dmg file, for Mac OS 10.4-7. It can be accessed at http://nb23.com/Diss/4Quarters%201.1.dmg.