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Dialtones: A Telesymphony

Dialtones is a large-scale concert performance whose sounds are wholly pro-
duced through the carefully choreographed ringing of the audience's own cell
phones. Because the exact location and tone of each participant's mobile phone
can be known in advance, the *Dialtones* Telesymphony will be able to present
a diverse range of unprecedented sonic phenomena and musically interesting
structures. Moreover, by directing our attention to the unexplored musical poten-
tial of a ubiquitous modern appliance, *Dialtones* inverts our understandings of
private sound, public space, electromagnetic etiquette, and the fabric of the
communications network which connects us.

Dialtones begins with a brief preparation phase prior to its performance, during which the
members of the audience register their wireless telephone numbers at a cluster of secure
Web kiosks. In exchange for this information, the participants receive their seating assign-
ments in the concert venue, and new "ringtones" are then automatically downloaded to their
handsets. During the concert itself, the audience's mobile phones are brought to life by a
small group of musicians, who perform the phones en masse by dialing them up with a spe-
cially designed, visual-musical software instrument. Because the audience's positions and sounds
are known to the *Dialtones* computer system, the performers can create spatially-distributed
melodies and chords, as well as novel textural phenomena like waves of polyphony which
cascade across the crowd; these musical structures, moreover, are visualized by a large pro-
jection system connected to the performers' interfaces. Towards the end of its half-hour com-
position, *Dialtones* builds to a stunning crescendo in which as many as two hundred mobile
phones peal simultaneously. It is hoped that the experience of *Dialtones* will permanently
alter the way in which its participants think about the cellular space we inhabit.

Background and Context

Wireless telephony has quickly become an indispensable aspect of modern life. Today,
one in ten people on the planet possesses a mobile phone; over the next three years,
according to the industrial analysis firm The Gartner Group, this market is expected to
increase by almost a billion new users. Ironically, the astonishing eagerness with which
we have adopted mobile phones is matched by our almost equal repulsion on the occa-
sion of a cell phone's ringing. Mobile phones now infuse our theaters and public spaces
with the least welcome details of our neighbors' intimacies, and perforate our private lives
with the sonic machinery of electronic commerce. Our emotional reactions to these inter-
jections can even outstrip the veneer of our professional identities: when ringing mobile
phones interrupted keynote speakers at a recent telecommunications conference in Fin-
land, the conference manager became enraged and threatened to get a radio-frequency
scrambler to silence the din. Caught between adoration and irritation, we have come to
regard our intimate communications apparel with a deep ambivalence.
In the hype, hate and hypnosis surrounding the mobile phone, its potential as an ingredi-
ent of art has been largely overlooked. As with the proverbial fish who would never dis-
cover water, we take for granted that we are immersed in cellular space, our imaginations
dulled by the extraordinary ubiquity of our wireless devices. Announcers at every mod-
ern-day concert command us to turn off our cell phones, but what Cagean aesthetic pos-

sibilities might we discover in leaving them on? What deranged beauty might we find, or what might we learn about our interconnected selves, in their high, pure tones? The mobile phone's speakers and ringers make it a performance instrument. The buttons make it a keyboard and remote control. Its programmable rings make it a portable synthesizer. Yet, although no sacred space has remained unsullied by the interruptions of mobile phone ringtones, there is no sacred space, either, which has been specifically devoted to their free expression. In the context of this lack, and in the context of our society's contradic-tory attitudes towards wireless communication technologies, *Dialtones* is proposed.

The *Dialtones* Experience

If our global communications network can be thought of as a single communal organ-ism, then the goal of *Dialtones* is to indelibly transform the way we hear and understand the twittering of this monumental, multicellular being. One of *Dialtones's* strategies for doing so is the musical reification of this organism's sprawling and enveloping omnipres-ence. By placing every participant at the center of a massive cluster of distributed speak-ers, *Dialtones* makes the ether of cellular space viscerally perceptible. In a rejoinder to the eminent electronic composer Iannis Xennakis—who once complained that all electronic music sounded alike, because it would inevitably emanate from the same pair of speak-ers—*Dialtones's* radical surround-sound is at once musically and phenomenologically unique. In an appropriate acoustic environment, the sporadic triggering of calls to mobile phones can evoke the placid chirps and trills of crickets, cicadas, frogs and birds. If hundreds or even thousands of mobile phones were to ring simultaneously, by contrast, the result would be an unimaginably seething, engulfing cacophony. Between these two textural extremes

lies an enormous terrain of more musically familiar possibilities: gently shifting diatonic chord progressions, distributed and aggregate melodies, roving clouds of spatialized sound-clusters, and pointillistic hyper-polyphonies. Over the course of its planned half-hour duration, *Dialtones* will explore sequences and combinations of each of these possibilities, scaffolded throughout by a set of recurring harmonic themes and slowly-evolving melodic phrases. Ultimately, the exact composition of *Dialtones* will be a function of both the scored performance produced by the project's staff, and the button-by-button interactions of the concert's attendees. In *Dialtones,* the phones, and not their owners, speak to one another. By summoning a communication between communications technologies in which there is no interlocutor, *Dialtones* invites its participants to perceive an order in what is otherwise disorganized public noise, and ratify it as a chorus of organized social sound. Thus the overdetermination of the world of Work is countered with an equally determined Play, as the ringing of mobile phones—ordinarily, the noise of business, of untimely interruptions, of humans enslaved to technology—is transformed into a sound of deliberate expression, startling whimsy, and unconventional beauty.

Technical Realization

Dialtones's technical realization is broadly divided into two distinct subsystems: (A) the means by which the audience's mobile phones are registered (prior to the performance) into a networked database, and (B) the means by which the audience's cell phones are computationally dialed (and thereby performed) during the concert itself. In this section, each of these mechanisms is treated in turn.

A. Prior to the *Dialtones* concert, audience participants register their mobile phone numbers (and model numbers) at special Web-based terminals placed outside and around the performance venue. CGI scripts are used to store this information in a SQL database. At the same time, the scripts also use a ticketing algorithm to issue the audience member an assigned seat in the concert auditorium. Depending on the make and model of the participant's phone, it can be possible to programmatically modify its ringtone at this time; if so, a new ringtone is encoded in the RTTTL (ringtone) data format and transmitted to the user's phone as an SMS message.

B. After the participants' phone numbers and models have been collected and stored in a database, *Dialtones* itself is performed live on a custom software instrument which makes use of this database. This performance system consists of an interactive OpenGL visual interface, which represents each mobile phone in the audience as a spatialized cell in a visual grid. During the performance, the performers place "animated paint" into specific cells in the visual grid; these actions trigger the ringing of the corresponding mobile phones in the audience.

The performers' grid-based graphical interface is projected onto the audience from above, and carefully registered with their seats. As a result, each participant is lit up by a personal spot of light whenever their handset is rung. In this way each individual becomes an audio-visual pixel, a twinkling particle in an audio-visual substance—and the participants, as a group, are at once audience, orchestra and (active) score.