Artifacts

Near-Future RFID

ANAB JAIN Microsoft Research

NICOLAI MARQUARDT University of Calgary

ALEX TAYLOR Microsoft Research

In this artifact submission, we present alternative, speculative visions around RFID, drawing attention to the possibilities of using the technology to connect people in curious, even celebratory ways. In our visions, RFID tagging and sensing has been extended so that tags and sensors allow individuals to build associations with digital content in the physical world. This tagging system allows people to instrument their environments for aesthetic as well as practical reasons. Moreover, people manipulate, extend and constantly update their digital selves. The RFID infrastructure is this used as a performative resource. One consequence of this is that ideas of self and privacy are altered dramatically as personal information, that was once invisible, is made visible and appropriated into a new aesthetic sensibility.

We present a selection of conceptual artifacts and narratives based on the above speculation. In doing so, we loosely draw on what has been termed *critical design*, a perspective that employs design to provoke thought around the possibilities of certain technologies, and open spaces for debate and reflection. RFID readers are subject to a similar examination.

Conceptual artifacts:

The presented artifacts explore the scope for RFID tag design. They use the conventional RFID tag design as a starting point, but aim to provoke new ways of thinking about tags in everyday use. RFID readers are subject to similar explorations; their designs are considered in terms of the speculative visions below.

Artifacts

332

Artifacts

Speculative visions:

The speculative visions imagine RFID being incorporated into established online, social networking practices. Here, though, physical tags and readers take on prominence.

From small familiar RFID antenna on bespoke jewelry to largescale experimental wallpapers, invisible tags become visible and contribute to new aesthetics. Tagged accessories are worn to manage different levels of intimacy, content and broadcast range. Users associate these accessories with digital content using an online service, and use their Mobile Readers to scan the environment for content published by others.

We present the *Body Ranger* to envisage the uptake of RFID by particular communities. This RFID reader, incorporating headphones, is designed to sense RF emissions over long distances.

Sounds are associated with tags so that a user can continuously hear changing audio content as he/she moves through physical space. Any visual content can be viewed by pointing the device in the direction of a RFID tag. Exploiting this, community members physically tag their neighborhoods and adorn themselves with elaborate tattoo-like antennas attached to RFID chips. Using the Body Ranger, digital content thus constitutes a traversable geography interleaving features of the physical and audio-visual.

While some may choose to openly broadcast content, we imagine others remain fearful and suspicious of the tracking potential of RFID. The *Head Guard* is envisaged as a device to counter such fears. It consists of a long-range RFID reader attached to a headset. It buzzes and vibrates when a tagged person or object approaches. Recorded data can be fed into a computer and visualized in different ways. The Head Guard protagonist is imagined spending his days scanning his neighborhood, obsessively rendering the generated data in different ways.

EPIC 2008 / Artifacts

333