A Cooltown Demonstration at WMCSA 2000

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We propose to demonstrate some of the technologies that we describe in our paper *People, places, things: web presence for the real world*, which has been accepted for presentation at WMCSA 2000. For those unfamiliar with those technologies, a brief overview follows.

Overview of CoolTown approach - a focus on mobility

The HP Labs Cooltown project (www.cooltown.hp.com) demonstrates novel but realistic approaches to the support of mobile users in dynamic environments. We leverage web technologies to maintain "web presence" for people, places, and things.

Things become web-present by embedding web-servers in them or by hosting their web-presence within a web server. Places become web present by organizing web things into collections under the management of a web-service we call a "PlaceManager". People become web present by offering global web home pages with "WebLink" services to facilitate communications and by offering information via location-specific PlaceManagers. Our work reflects a vision of integrating the physical and web worlds so people can enter new places and find the things they need easily.

We use Uniform Resource Locators (URLs) for addressing, providing both usability and flexibility. People, places, and things are all represented via URLs: at first contact all objects are web services. Consequently we have no API or "driver" model beyond the transfer of data between clients and servers. While subsequent communication can establish alternative relationships, a great deal can be done within the web communications model. We have multiple approaches to service discovery, including infrared beaconing of URLs, bar codes, RFID and iButton mapping to URLs, and IP network multicast discovery. Our directory systems are just web pages from web servers or directories encapsulated behind web query forms.

Vital to the success of our scenarios is our use of URLs in handheld devices. A wide variety of handheld devices could support a "clipboard" function for URLs. We show how this simple facility can be combined with location-dependent physical addresses (like beacons and tags) and web-aware appliances to support mobile users. On top of the basic infrastructure we have built a number of example applications, including support for a Cooltown conference room, a bus for travelers in Cooltown, a Cooltown museum and bookstore, and a Cooltown cafe. Each example illustrates some aspects of the Cooltown vision.

Demo Layout and Space Requirements

Our demo will consist of approximately 4-5 stations each 4'x4' with at least one side to the visitors and one side shared with another station. Our equipment consists of a variety of handheld devices, appliances and laptops communicating using WaveLAN, infrared and Ethernet. We would like to erect a banner and posters behind the demo tables.

Technical and Equipment Requirements

LAN speed Internet access would make our demo more convincing.

Interoperability

We can provide software for conference attendees using Palm or WinCE devices who want to try the demos with their own equipment.