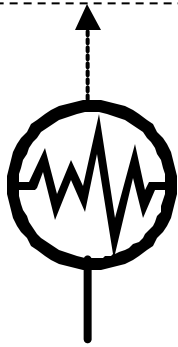




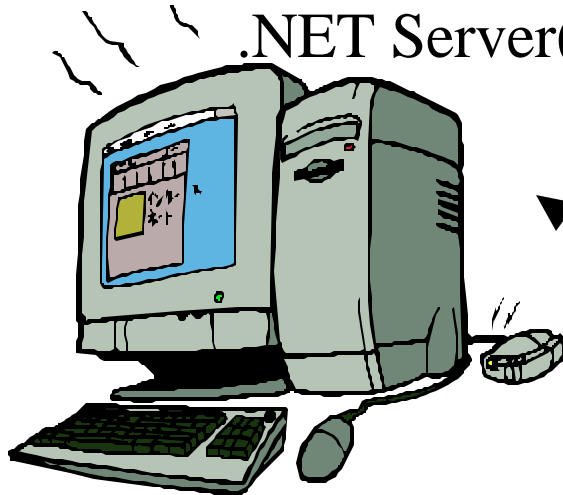
# Project Voyager

Building Collaborative, Context-Aware Mobile Guides

**Programmable Low Power Radio Boards**, probably RFM TR1000 transceivers coupled with an 8051 MCU core + ROM/RAM. These boards act as an interface between the sensors, WAN connection, and the iPaq.



## .NET Server(s)



The .NET server(s) delivers a variety of web services to the iPaq, including updated maps, satellite photos, collaborative data (photos, stories, reviews, and audio annotations from other users), and also additional content (e.g. MS Encarta articles) as needed. The servers also receive information from each iPaq device as user data, allowing the user to upload their images, reviews, comments, and voice annotations to the server, for later review and playback.

Web Services

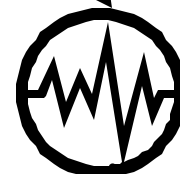
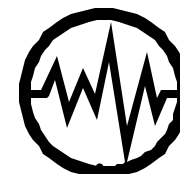
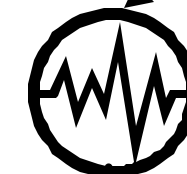
User Data

## iPaq Hub

Static content for a particular location is stored on compact flash memory cards. The Hub is also equipped with a radio connection to receive sensor data and to connect to a data phone or CDPD modem. The user can view data via an interactive application, access remote web services, and upload collaborative information (photos/comments/audio annotations) to .NET servers.



Local Radio Connection (115.2 kbps)



...

WAN Connection (GSM/CDMA/CDPD)

GPS

Environmental Sensors

*Sensors*