Sound of the City

Project presentation

Server

Requirements:

- File upload
- Transmission of metadata (geo coord., desc.)

- Lightweight solution
- Easy to implement

- Quick setup of server

Server

SOAP Webservice:

- Flexible solution based on XML

- XML is good for textual information
- But audio samples are binary data

- So what can we do?

→ Base64 encoding (adds overhead of up to 36%)

Server

- Android supports Base64 encoding
  → Built-in class of the SDK
- Support for SOAP is also available
  → kSOAP library
- Sending requests is easy (~ 10 lines of code)
- Response is either XML or JSON

Server

- Server prototype written in PHP
- Requires stock Apache webserver

Full handling of requests, i.e.

- Base64 decoding
- Writing file to disk
- Storing metadata in database (PDO)
- Respond with status code + message

Server

Service methods:

- uploadSample(Lat, Long, Title, Time, Descr, Type, Payload)
- reportNoiseLevel(Lat, Long, Time, ZipCode, NoiseLevel)

- getSamples(Lat, Long, Range)
- getNoiseLevels(Lat, Long, Range)
- getAverageNoiseLevel(Lat, Long, Range)
- getAverageNoiseLevelByZipCode(ZipCode)

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Server