

Der FHFTTrain als Modell für eine serviceorientierte Architektur im Ubiquitous Computing

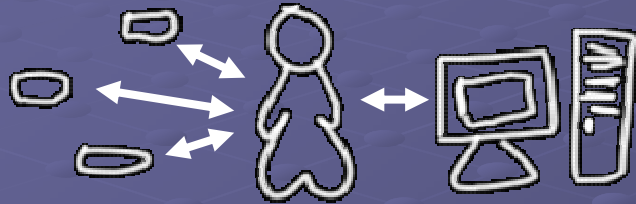
Heiko Böttger
Prof. Dr. Lothar Piepmeyer
Hochschule Furtwangen

Agenda

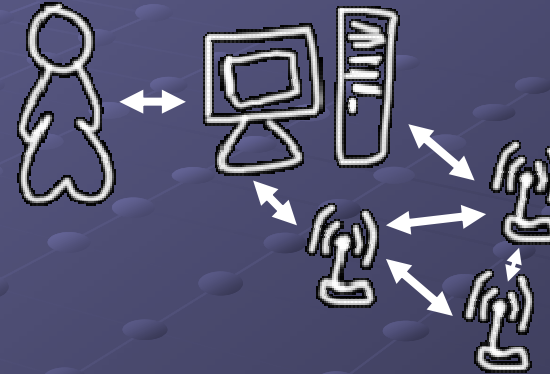
- Ubiquitous Computing
- Versuchsaufbau
- Echtzeit
- Technologien & Services
- Problemstellungen
- Zukunft

Ubiquitous Computing

Heute



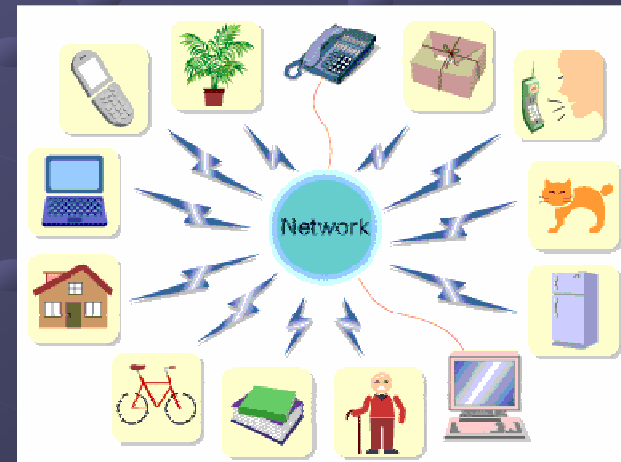
Ziel



Barcode-Scanner
www.hobert.de



<http://old.sydney.siggraph.org.au>



www.ntt.com

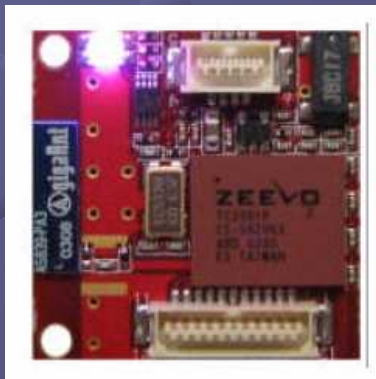
Ubiquitous Computing



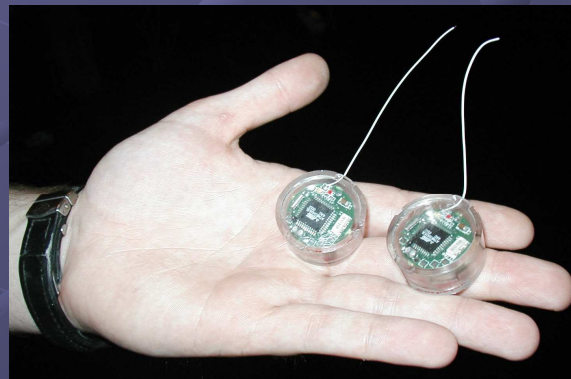
www.acer.de



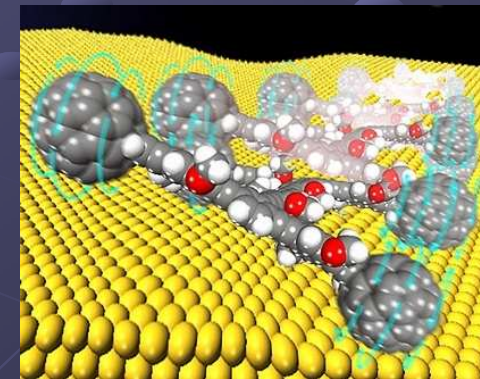
www.new-worxs.de



www.intel.com

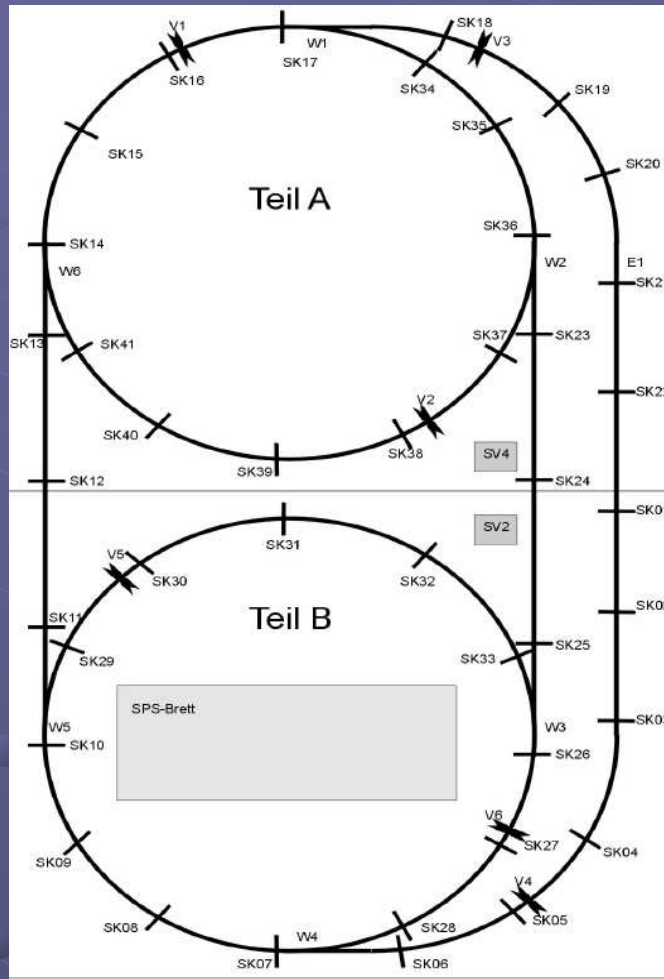


<http://webs.cs.berkeley.edu/800demo/>

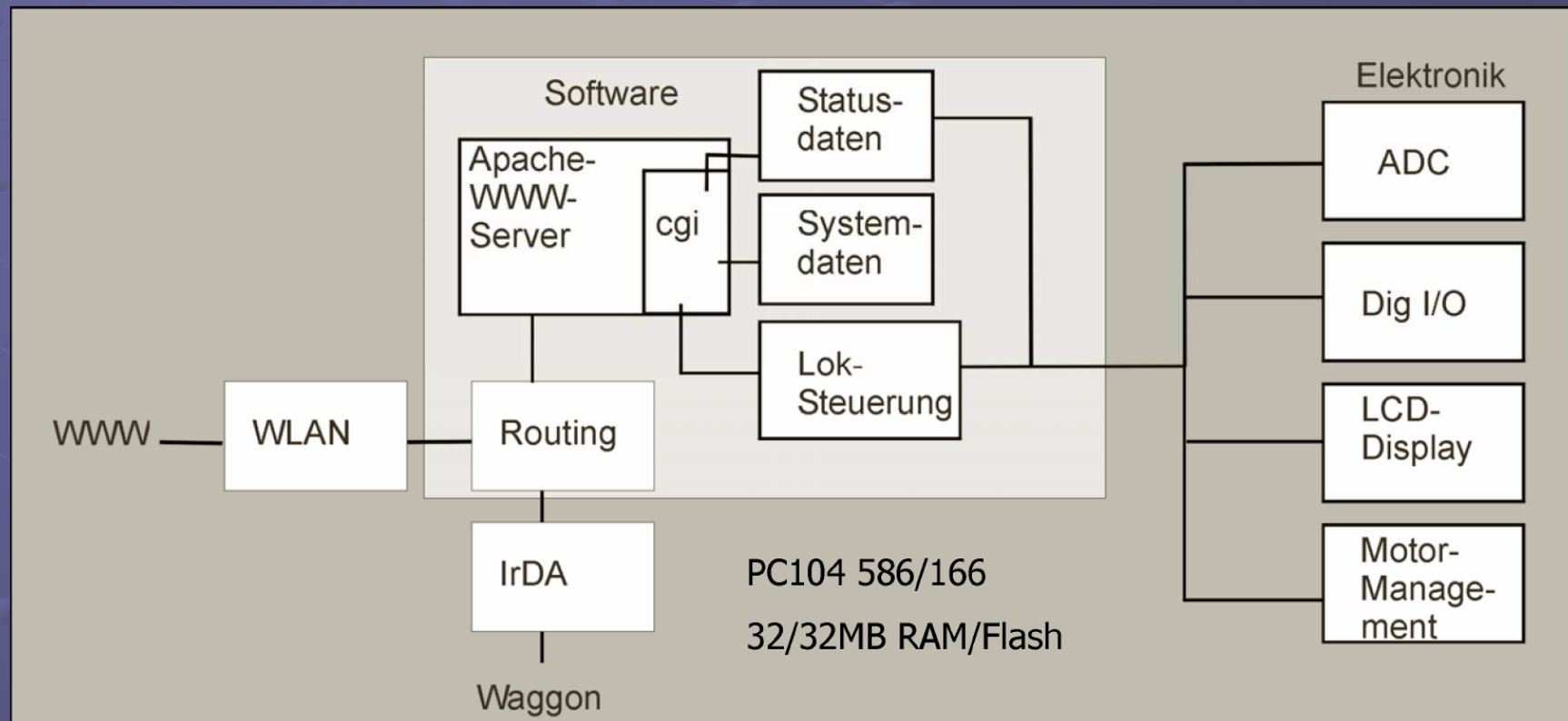


www.autobild.de

FHFTTrain-Projekt



Hardware der Lokomotive



Echtzeit

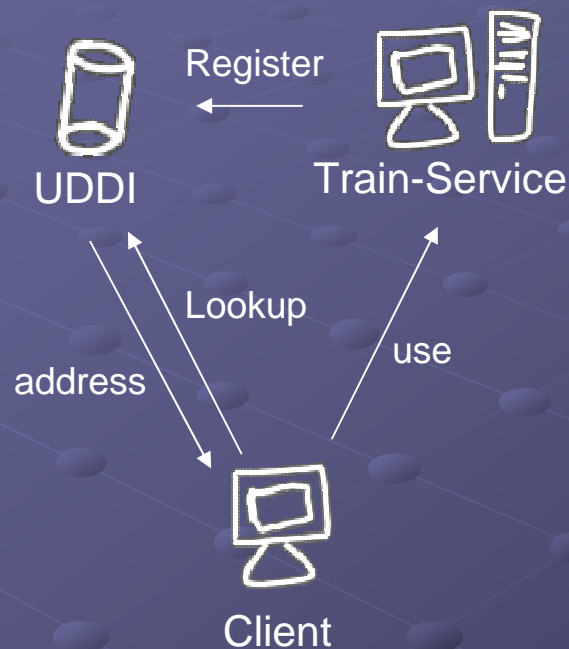
- Verteiltes Echtzeitsystem
- Moderate Echtzeitanforderungen
 - Weichen
 - Sensoren
 - Lokomotive

Technologien

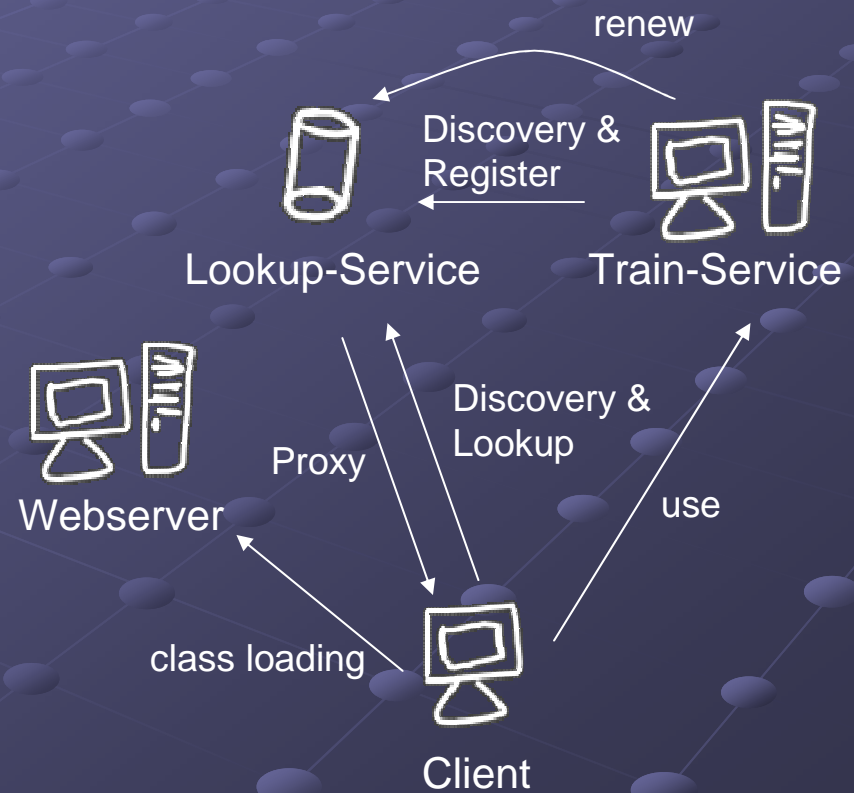
	J2SE 1.4.2_10	J2ME CDC 1.0.1 Foundation
Installation	~60 MB	~3 MB
Java-lib (rt.jar)	~21 MB	~570 KB
JAX-RPC	~17 MB	~82 KB
Basis-Klassen	~8757	~1260
RAM	32 MB	2 MB

Service-Technologien

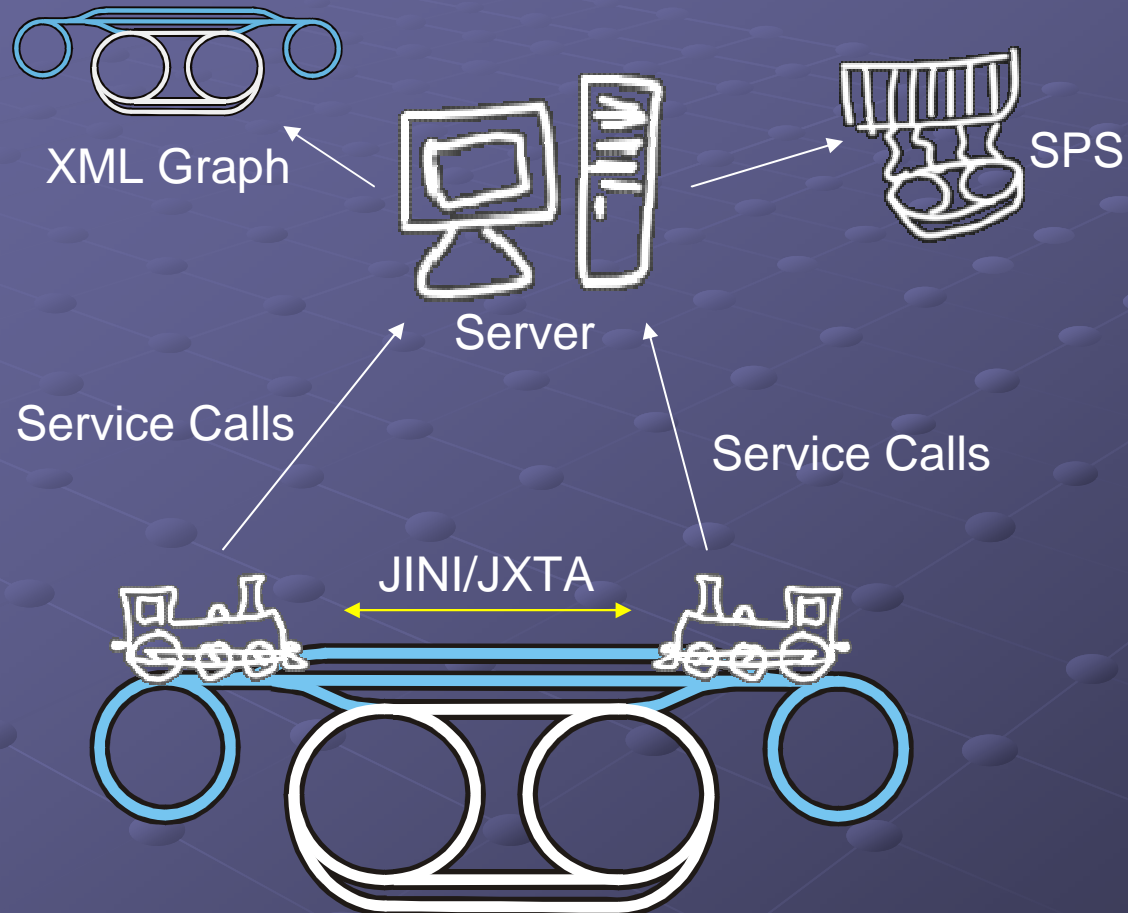
Webservices



JINI



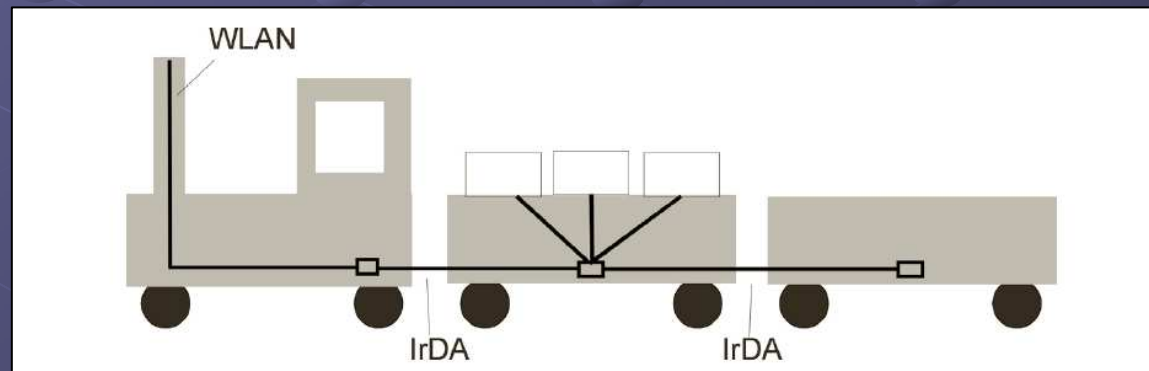
Kommunikation & Services



- Services für
- class loading
 - graph reading
 - roadmap calculation
 - branch setting
 - section retrieving
 - position detection
 - collision detection

Problemstellungen

- Transportlogistik & Paketverfolgung
- Kommunikation
- Datenhaltung
- Sicherheit



Zukunft

- Größeres Streckennetz
- RFID-Sensoren
- JXTA als Alternative für JINI
- Intelligenter Bauteile

Quellen

- **SUN Developer Network**
<http://java.sun.com>
- **Jini.org**
<http://www.jini.org>
- **Dr. Mark Weiser**
<http://www.ubiq.com/weiser>
- **Rice University**
<http://www.media.rice.edu/>
- **Prof. Dr. Christoph Reich - XML & Webservices**
<http://www.informatik.fh-furtwangen.de/~reich/>

Fragen

