AV Project/Seminar: FITT related topics.

Fraunhofer FOKUS, April 2014
The context of the topics.

What does Future Internet Experimentation mean?
If it ain’t broke, don’t fix it.

Bert Lance, May 1977
The Internet is broken.

David D. Clark, Dec. 2005
How to fix it? What is the future?

(Federated Smart City Clouds)
Basically: have a playground.

Experimenters play around with Future Internet technologies...
The context of the topics.

Experiments in ...

school labs
The context of the topics.

Experiments in ...

school labs  scientific labs
The context of the topics.

Experiments in ...

- school labs
- scientific labs
- federated labs
The context of the topics.

Future Internet Experiments in ...

a single testbed
(aka lab)
The context of the topics.
Future Internet Experiments in ...

a single testbed (aka lab) ➟ multiple testbeds
The context of the topics.

Future Internet Experiments in ...

a single testbed (aka lab)

multiple testbeds

federated testbeds
The context of the topics.

Management of Federated Future Internet Experiments.

this is our focal point

managed federated testbeds (Interclouds)
The team you might join.

Future Internet Testbeds & Tools.
The context **within AV.**

[http://av.tu-berlin.de/fitt](http://av.tu-berlin.de/fitt)

**Future Internet Testbeds & Tools**

**Machine-to-Machine & Internet-of-Things**

**Smart Communication Platforms**

Alexander Willner

Hakan Coskun

Julius Müller
Future Internet Testbeds & Tools
http://av.tu-berlin.de/fitt

Researchers:
- Alexander Willner
- Daniel Nehls
- Ozan Özpehlivan
- Stefan Covaci
- Stephan Albrecht
- Yahya Al-Hazmi
- ...

Students:
- Mitja Nikolaus
- Mingyuan Wu
- ...

Come in We’re Hiring
FITT related **education.**

How to learn about Management of Future Internet Experiments?

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Next Generation Networks  
9 ECTS, summer term  

Future Internet Technologies  
3 ECTS, summer term  

**lectures**

Seminar (theory)  
9 ECTS, every term  

Project (coding)  
3 ECTS, every term  

**theory & practice**

Bachelor/  
Master Thesis  

PhD Thesis  

**graduation**

**research**
FITT related research projects.

How to keep up to date with the latest developments?

former project

current projects

(more in the pipe)
FITT related **tools.**

How to develop for software in this context?

former tool

current framework
3 Today's topics.

How you contribute.
List of possible topics.

You can also define your own...

The general context is the semantic description of resources

**Keywords**: RDF, RDFS, OWL, TURTLE, JSON-LD, XML, HTML5/JS, J2EE
List of possible project topics.
You can also define your own...

The general context is the semantic description of resources
**Keywords**: RDF, RDFS, OWL, TURTLE, JSON-LD, XML, HTML5/JS, J2EE

Implementation and integration of
- an adapter for resource description / monitoring / control / provisioning (e.g. dancing robot)
- an J2EE MDB interface to register and trigger resource adapters
- a resource reservation module
- an RDF <-> GENI SFA related data models translator web service
- a standard interface to control resources (XMPP based)
- a standard interface to list and provision resources (XML RPC and SSL based)
- an HTML5-based RDF visualisation and query module
into an J2EE environment with Triplet Store.
List of possible project topics.
You can also define your own...

- HTML5/JS based development of the XIFI Federation Manager
- Free Style: Using FI-WARE Generic Enablers within XIFI
- Free Style: Implementing IEEE InterCloud related components
- Integration of a PDP (Policy Decision Point) into the Fraunhofer testbed
- HTML5/JS based GUI for our FanTaaStic testbed start-up
List of possible seminar topics.
You can also define your own...

- Business View
  - FIRE Test Facilities for SME's

- Resource Description
  - Survey of infrastructure ontologies (INDL, NDL-OWL, NOVI, ...)
  - Survey of monitoring ontologies (MOMENT, ...)
  - Survey of resource reservation ontologies (NOVI, ...)
  - Survey of ontology visualisation tools (LodLive, ...)

You can also define your own...
The End.

If you remember nothing else...
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Future Internet Testbeds & Tools

Topics: http://av.tu-berlin.de/fitt
FITeagle: http://fiteagle.org

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