

---

# OpenIMP - Internet Measurement Project

---

TF-NGN Meeting Madrid

January 2004

Lutz Mark, Rudolf Roth

Fraunhofer FOKUS

[mark|roth@fokus.fraunhofer.de](mailto:mark|roth@fokus.fraunhofer.de)

---

# Overview

- features
- architecture
- example setup
- current work items
- related standardization & dissemination

---

## General

- QoS Monitoring System for distributed measurements
  - integrating active and passive measurements
  - easy control of distributed measurements via configuration on a central server
- 
- developed under DFN Quasar / IST Sequin
  - further extensions in IST 6QM project
  - deployment in various projects / demonstration use in Fraunhofer Intranet
- 

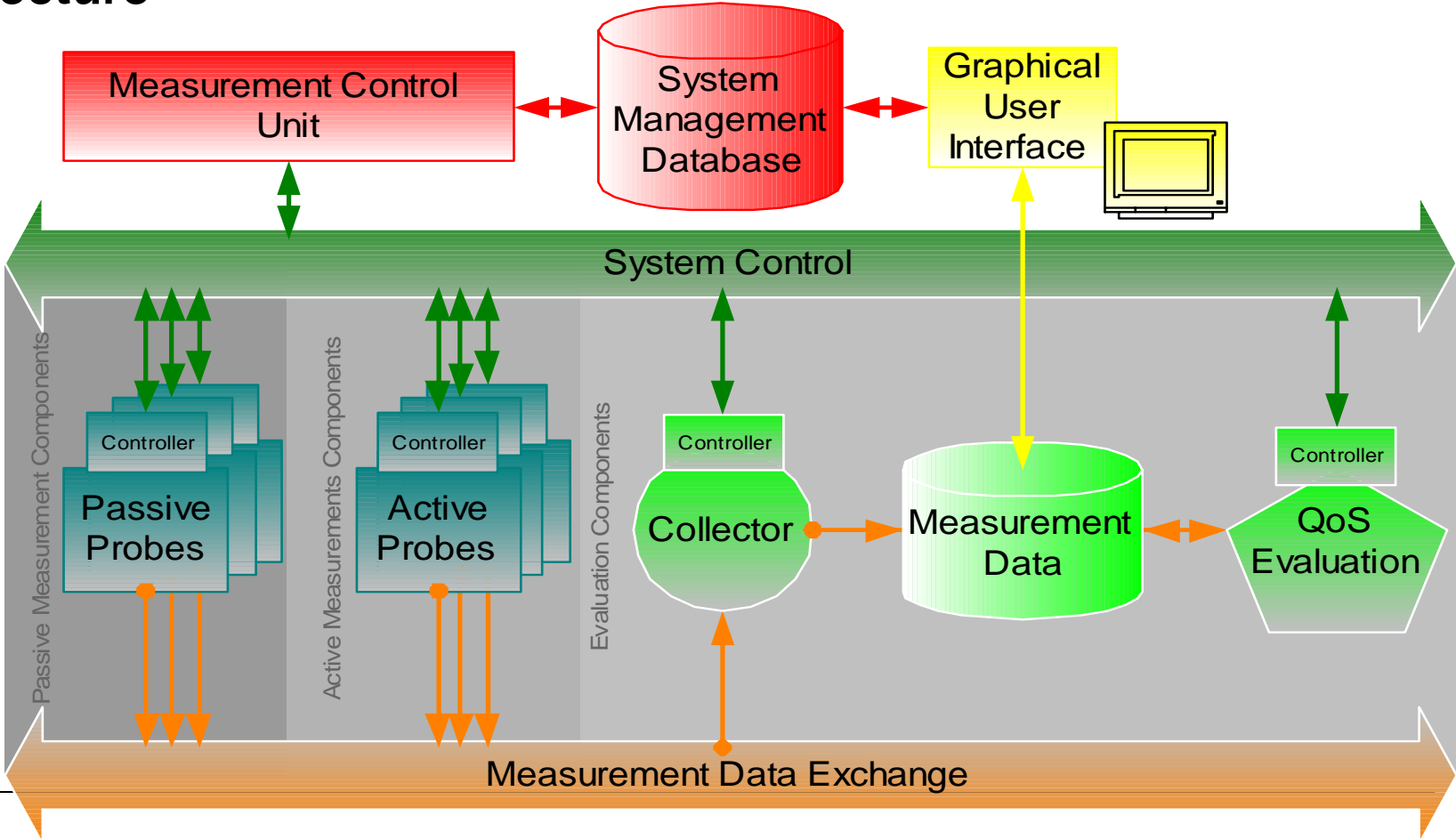


---

## Capabilities

- One-way-Delay, Delay-Variation
- Packet Loss
- Volume (packet and byte count)
- Traffic Capture
  
- IPv4 and IPv6 Support
- Web based visualization of measurement results
- Web based management interface
- running on standard PC, Linux or FreeBSD

# Architecture



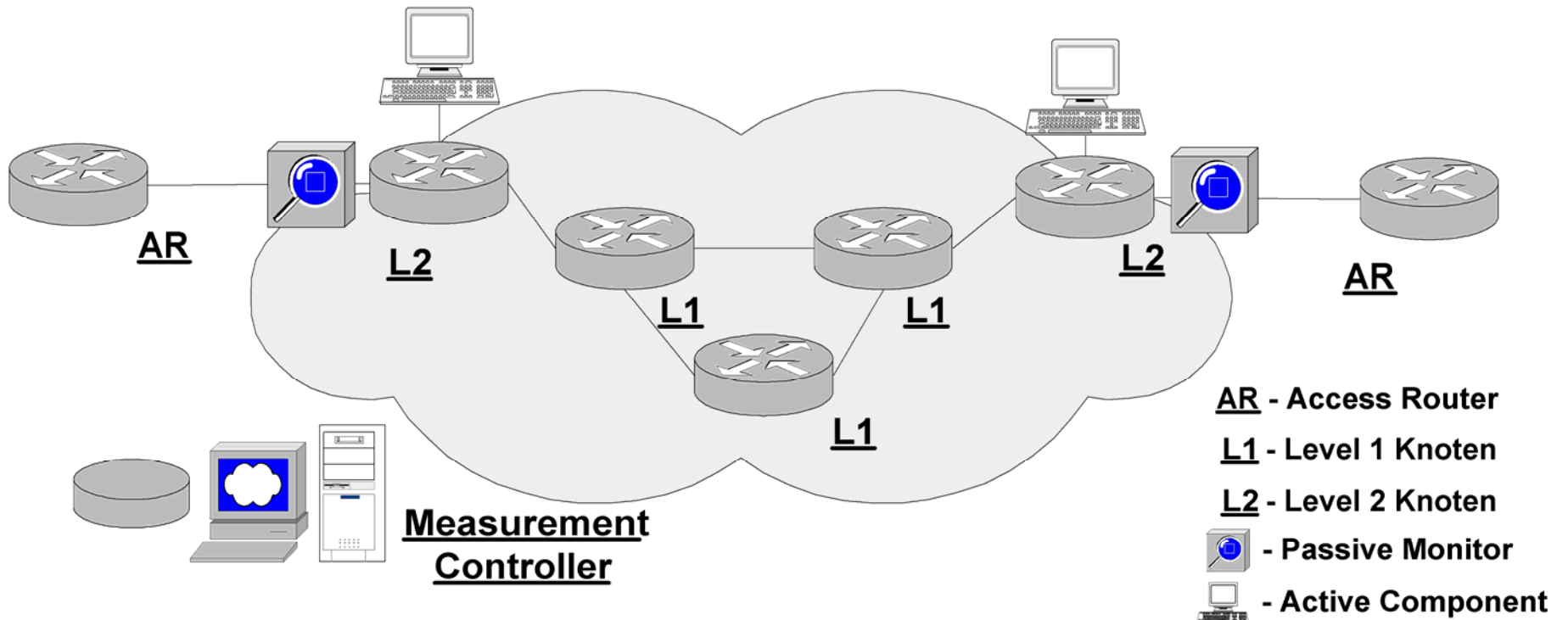
---

# Components

- Measurement Controller (*impc*)
- Measurement Servers (*impd*)
  - **Passive Probes**
    - Connected via network taps, monitor ports
    - Experiments to run demon on RIPE TTM box
  - **Active Probes**
    - Active QoS measurements
    - Generate test traffic
  - **Evaluation Server**
- Data Collector (*impcol*)
- Database
- Web server



# Example setup for NREN



---

## Work Items

- IPFIX export for impd, impcol (6QM by Mar 04)
- http/xml control interface for impc/impd
- Sampling functionality
- Support for inter-domain measurements (interest on cooperation with perfmonit)
  
- openIMP setup in 6QM and IP-QoS projects

### **OpenIMP – internet measurement project**

- Website <http://www.ip-measurement.org/openimp>
- Availability: request to [mark@fokus.fraunhofer.de](mailto:mark@fokus.fraunhofer.de)

---

## IETF IPFIX

- Requirements `draft-ietf-ipfix-reqs-14.txt`  
nearly finished, only few IESG comments
  - Protocol `draft-ietf-ipfix-protocol-02.txt`  
central working item
  - Architecture `draft-ietf-ipfix-arch-02.txt`
  - Info Model `draft-ietf-ipfix-info-02`  
in progress
  - Applicability `draft-ietf-ipfix-as-01.txt`  
started, awaiting protocol results
  - discussion issues on mailing list
    - to allow UDP ?
    - security considerations
    - time stamp accuracy
- 



---

## IETF PSAMP

- Framework draft-psamp-framework-05.txt  
close to WG last call
- Sampl. and Filtering draft-ietf-psamp-sample-tech-04  
v04 to be released next days - close to WG last call
- MIB draft-ietf-psamp-mib-01.txt  
recently started
- Info Model draft-ietf-psamp-info-00  
currently started, as IPFIX extension
- individual contributions on hash-functions, flow selection, PktID,



---

## Coordination Action Monitoring and Measurement Cluster MOME

- CA for knowledge and tool exchange between FP5 + FP6 projects and other European partners in the field of Monitoring and Measurement
- key objectives
  - evaluate and promote interoperability of tools, comparability of results
  - select Data Format, Protocols for Configuration and Export
  - collect and disseminate measurement data
  - co-ordinate standardisation activities
  - organise workshops and conferences
- 8 Partners: Salzburg Research, AT; NEC Europe, UK; Telefónica I&D, ES; Uni. Libre de Bruxelles, BE; Budapest Uni. of Tech. and Econ., HU; Warsaw University of Technology, PL; Fraunhofer FOKUS, DE; TERENA, NL
- Duration 32 M, starting Jan 2004
- web: <http://www.ist-mome.org/>

