Open IMS Core and its practical application in research areas

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IMS – IP Multimedia Subsystem

- 3GPP designed architecture for 3G and further generation networks
- Oriented on the multimedia services as a key benefit
- Based on the open protocols (SIP, Diameter, MGCP...)

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Intro | Features | Development | Research | Education | SUT
Open IMS Core project

• Open source implementation of core elements by Fraunhofer Institute (Berlin)
• Open IMS Core implementation is based on SIP Express Router and MySQL
• Compliant with 3GPP specifications
Open IMS Core Architecture

Call Session Control Functions: process SIP signaling for session establishment and service routing

Home Subscriber Server: User data storage
Open IMS Core features

• Flexibility and robust performance
• ISC interface to connect the application server
• Charging data generation
• PSTN/PLMN interconnection module
• SMS-gateway capability module
• Emergency session establishment use case
• and more
Open IMS Core for developers

• Service development
  – Excellent IMS playground
  – Telco and converged services
  – Wide range of application server solutions available (BEA Web Logic, Mobicents, Sailfin, etc.)
  – Mobile TV, Business apps, Internet Mashup, Mobile Gaming, Unified Communications and so on...
Open IMS Core for developers

• User application development
  – Testing and debugging
  – Interoperability issues
  – Client-based IMS services development
Open IMS Core for researchers

- Architecture issues
- Security issues
- Performance testing and querying model researches
- Business models analysis
Open IMS Core for education

- Lab practice work
- Student projects
- Graduation thesis
Open IMS Core application practices in the St. Petersburg Bonch-Bruevich State University of Telecommunications

- Graduate works: topics around the IMS Testbed, SBC in the IMS, MRFC in the IMS
- Ph.D. Research: Querying model analysis for the IMS
- Education: Lab practice course, student projects
Thank you

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