The Elk Project
http://elk.itn.liu.se

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About the Elk Project

• Idea presented at Drupa 2004
• Development started in August 2004
• Project goal:

To design and implement an application framework in Java that provides the basic services needed by JDF-enabled software.
The Elk Project

• Consists of two separate parts
  – The Elk Framework
    • Mainly specifies interfaces and abstract classes
  – The Reference Implementation
    • Concrete implementations of the framework
    • A web application
The Elk Framework

- Package name: **org.cip4.elk**
- Interfaces and abstract classes that specify the services needed by a device:
  - Incoming/outgoing message dispatchers
  - JMF processors/handlers
  - JMF servlet
  - Queue
  - Process
  - Subscription manager
  - Factory for JDF elements
Overview of Important Classes

- org.cip4.elk.device
  - <<interface>> IncomingJMFD Dispatcher
  - <<interface>> JMFProcessor
  - <<interface>> OutgoingJMFD Dispatcher
  - <<interface>> SubscriptionManager

- org.cip4.elk
  - JDFElementFactory

- org.cip4.elk.device
  - <<interface>> Process

- org.cip4.elk.queue
  - <<interface>> Queue
Reference Implementation

- Package name: **org.cip4.elk.impl**
- Concrete implementations of the classes defined in the Elk Framework:
  - Dispatching JMF servlet
  - Synchronous message dispatchers
  - 10 JMF processors
  - Memory-based subscription manager
  - Memory-based queue
  - Approval process
  - MIME package reader
  - Tool for accessing URLs (http, https, file, ftp, WebDAV)
Test Tools

- Command-line client for sending JMF, JDF and MIME
  - Proxy support
  - HTTPS support
- Servlet for testing MIME package clients
  http://elk.itn.liu.se/elk/mime
To Be Done...

- The Elk Framework
  - Refactor JMFProcessor into 3 interfaces
    - SignalProcessor
    - QueryProcessor
    - CommandProcessor
  - More inter-device events
  - Add/refactor as reference implementation evolves

- Reference implementation
  - Full compliance to latest ICS Level 3
  - Add support for all 38 JMF message types
  - Asynchronous messaging
  - Full subscription/persistent channel support
  - Receive and submit MIME
  - Full queue support
  - A better process implementation

Help wanted!
Live Demo

- **http://elk.itn.liu.se/elk/jmf**
  The reference implementation web application. Send a *KnownMessages* Query to it to find out what it can do.

- **http://elk.itn.liu.se/elk/mime**
  For testing clients that send MIME packages. Send a MIME packages to it.
More Information

• The project web site: http://elk.itn.liu.se
  – Binaries
  – Source code
  – Documentation
    • Javadoc
    • Developer's tutorial
    • Design, UML
Thank you for listening!

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