SIP Communicator

Emil Ivov

FOSDEM, February 25th 2007

UNIVERSITÉ LOUIS PASTEUR STRASBOURG

Table of Contents

- What is SIP Communicator?
- SIP Communicator Overview – Currently supported and planned features.
- Deployment, customization and maintenance – Extensibility, ease of maintenance and deployment.
- Creating plug-ins for SIP Communicator

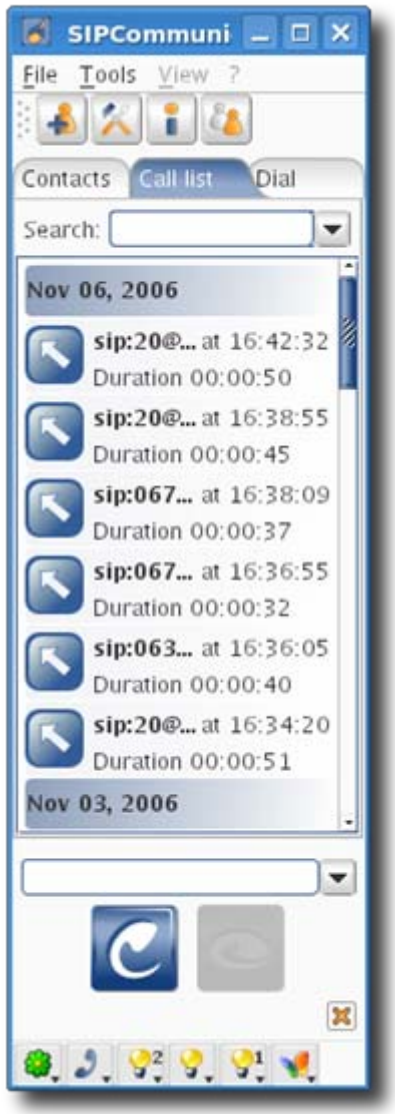
SIP Communicator Overview

SIP Communicator is an open source (LGPL) Audio/Video software phone and instant messenger. Among others, we currently support:

- *Audio and Video calls with SIP*
- Instant messaging with Jabber, ICQ/AIM, Yahoo! Msngr and MSN
- IPv6 support for SIP and Jabber
- Support for multiple accounts and meta contacts
- Basic NAT & Firewall Traversal with STUN.
- Modularity, extensibility, and flexibility with OSGi
- Platform specific installers for Windows, Debian, Fedora, Mac OS X

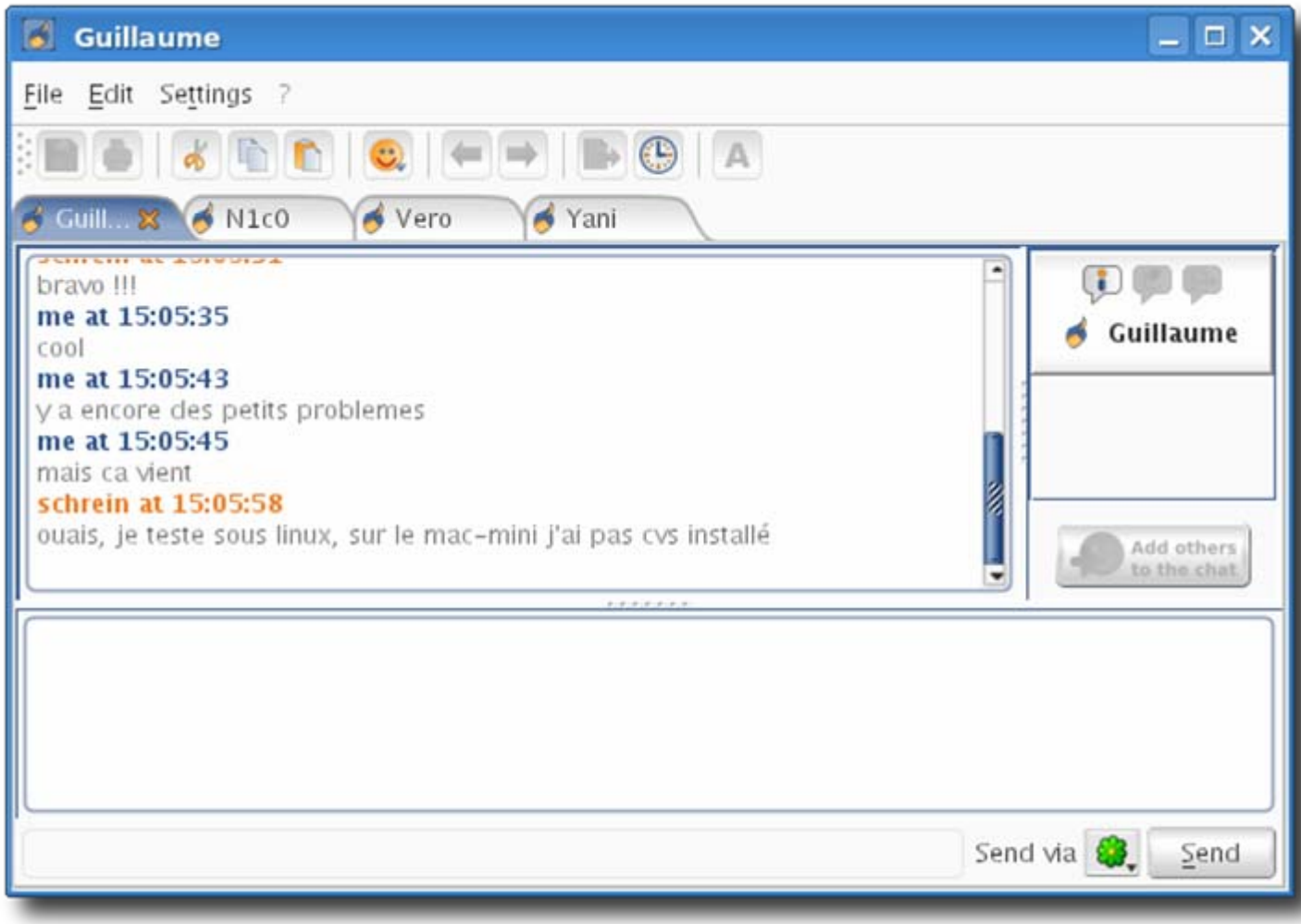
  visit http://sip-communicator.org for more details

SIP Communicator Overview



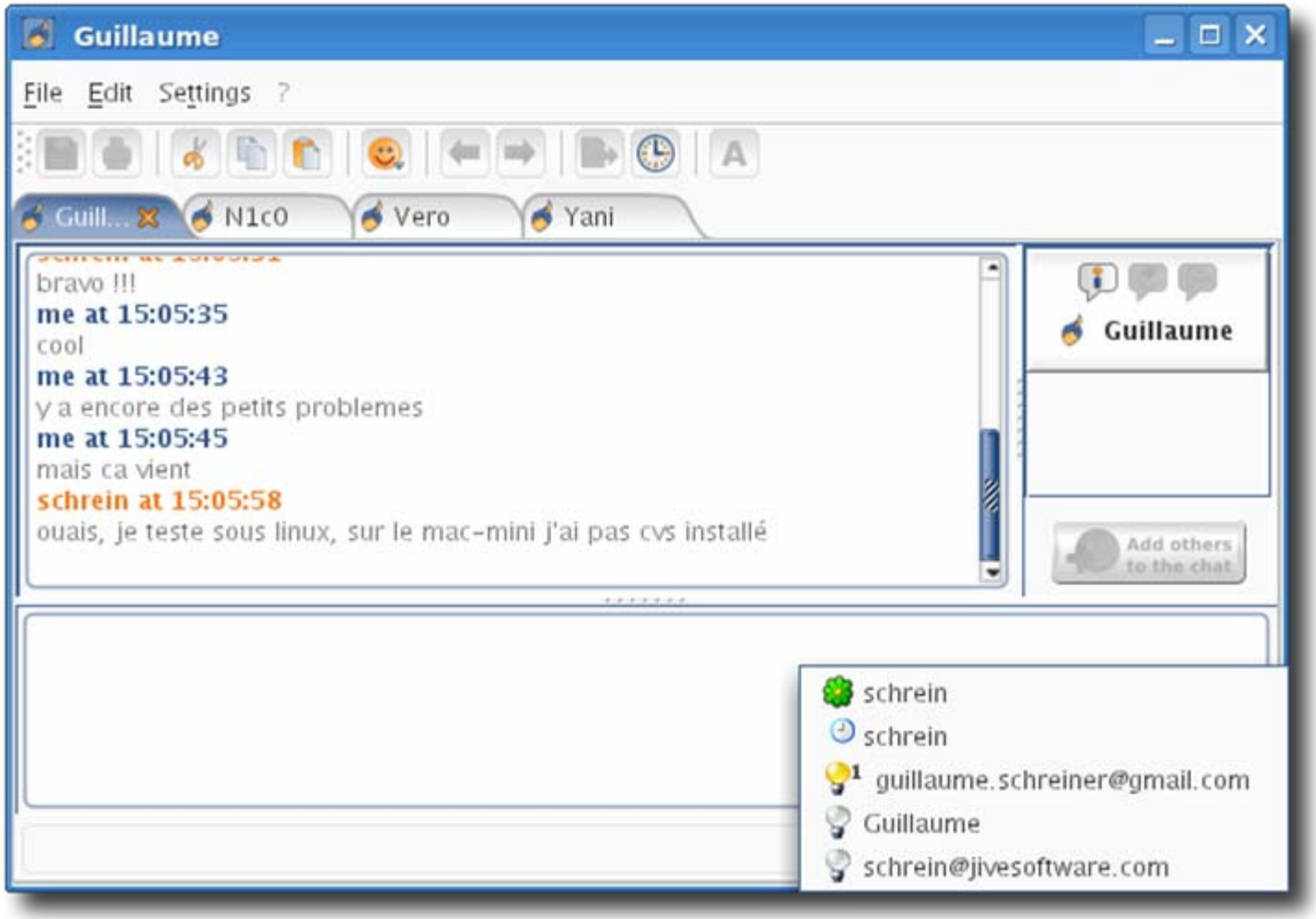
SIP Communicator Overview

Instant Messaging



SIP Communicator Overview

Instant Messaging

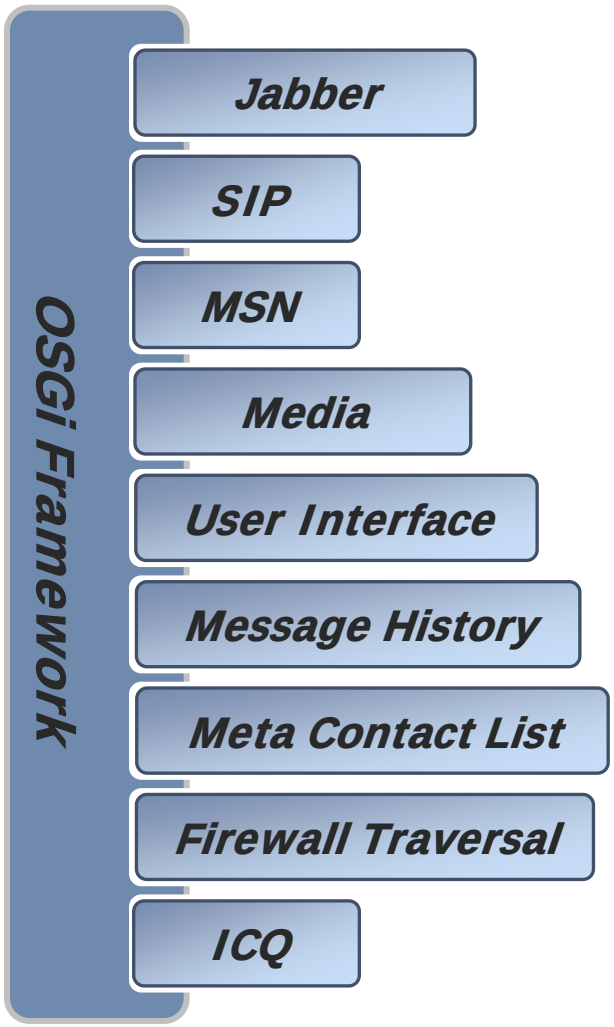


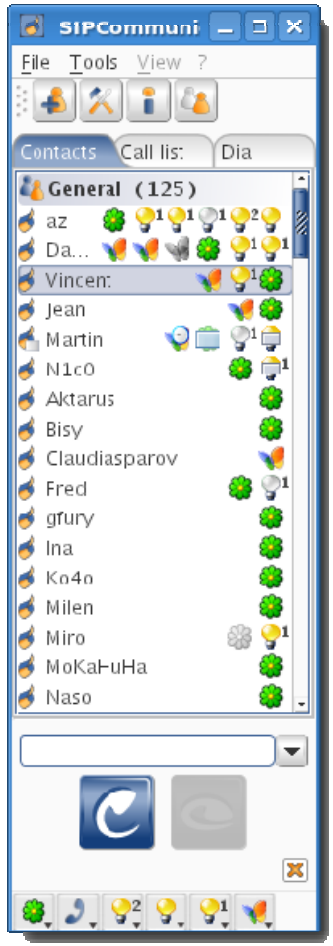
SIP Communicator Overview
Instant Messaging History

Features Currently in Progress

- **Powerful and scalable firewall support** – Combine technologies like TURN, STUN, ICE and P2P in order to achieve powerful, secure, and scalable firewall support.
- **Robust and Seamless IPv6 support –** We aim to achieve more than a mere “support for IPv6”. We would like to guarantee its transparent and seamless usage. In other words, usage of IPv6 should not require any special configuration and should not cause any problems.
- **Security –** Encrypt all media. Usage of P2P for firewall traversal imposes reliable security of all media transmitted by the SIP Communicator in order to prevent relaying nodes from eavesdropping.
- **Automatic updates and one-click plug-in installation** - Provide a user interface and an online repository for SIP Communicator plug-ins.
- **Other plug-ins** - IRC, shared whiteboards, multiparty video and chat conferencing.

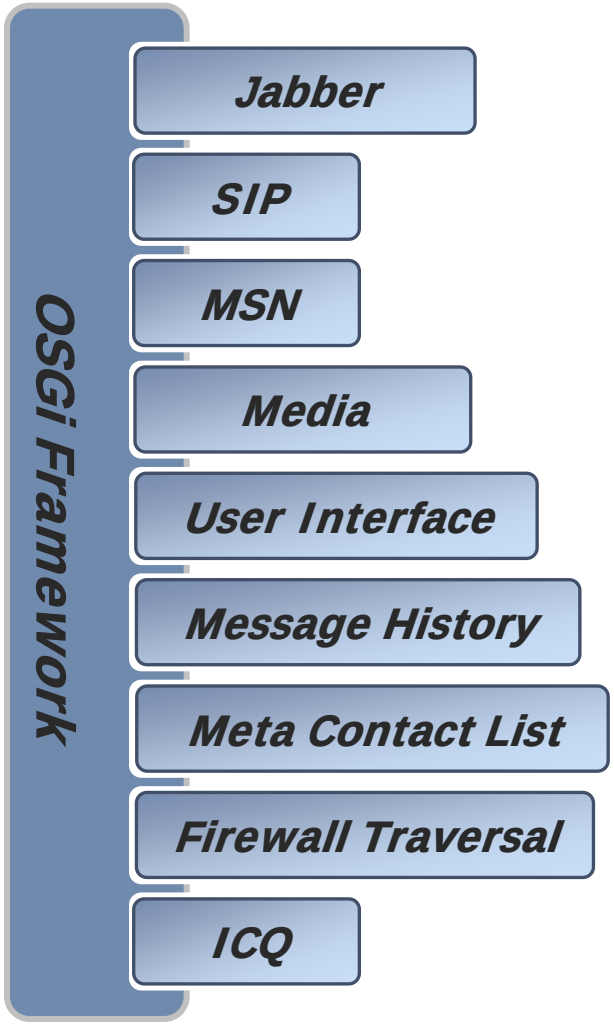
A Look Inside – The OSGi Core





UNIVERSITÉ LOUIS PASTEUR STRASBOURG

A Look Inside – The OSGi Core



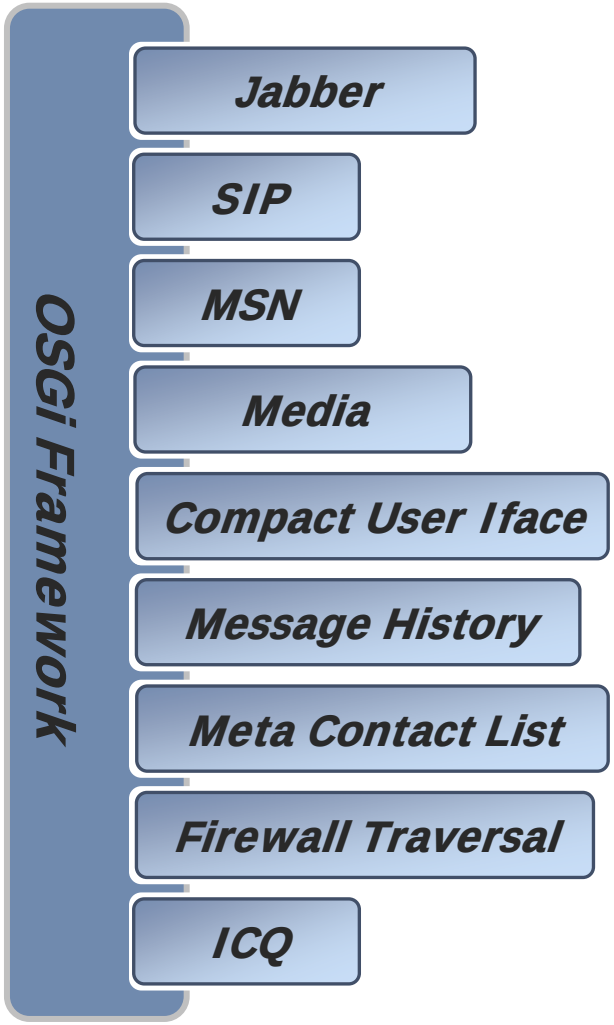
SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

- Modularity & Flexibility – All components of SIP Communicator are implemented as separate, replaceable modules. It is possible to run the application with different sets of features and functionalities depending on the intended user or target platform.

- Extensibility – It is very easy to implement additional features in the form of plug-ins. Developers that are new to SIP Communicator could easily start developing for it since they only need to get acquainted with existing APIs and not the entire source code.

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

A Look Inside – Modularity & Flexibility



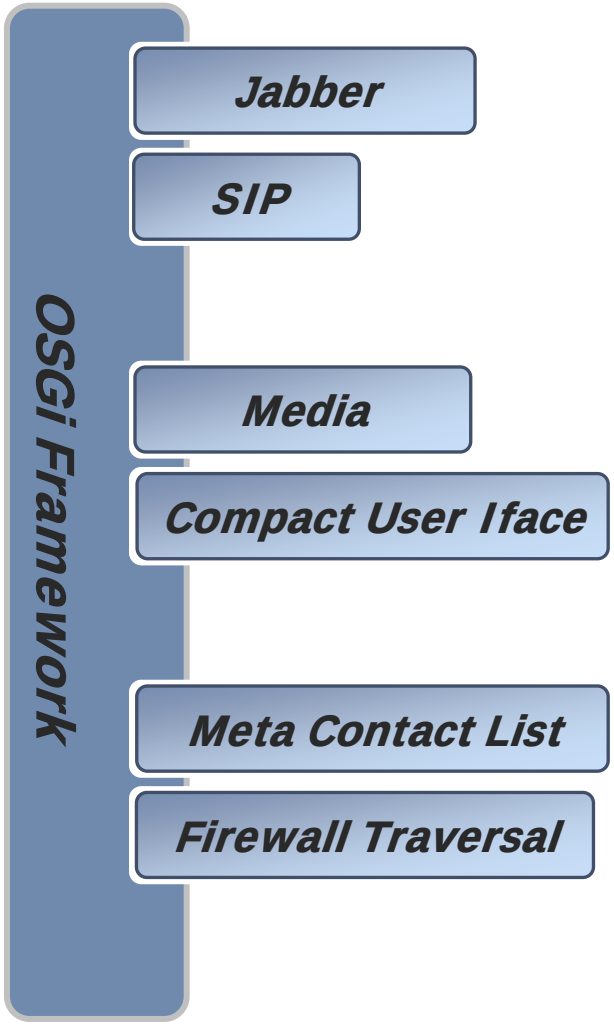
SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

- Modularity & Flexibility – All components of SIP Communicator are implemented as separate, replaceable modules. It is possible to run the application with different sets of features and functionalities depending on the intended user or target platform.

- Extensibility – It is very easy to implement additional features in the form of plug-ins. Developers that are new to SIP Communicator could easily start developing for it since they only need to get acquainted with existing APIs and not the entire source code.

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

A Look Inside – Modularity & Flexibility



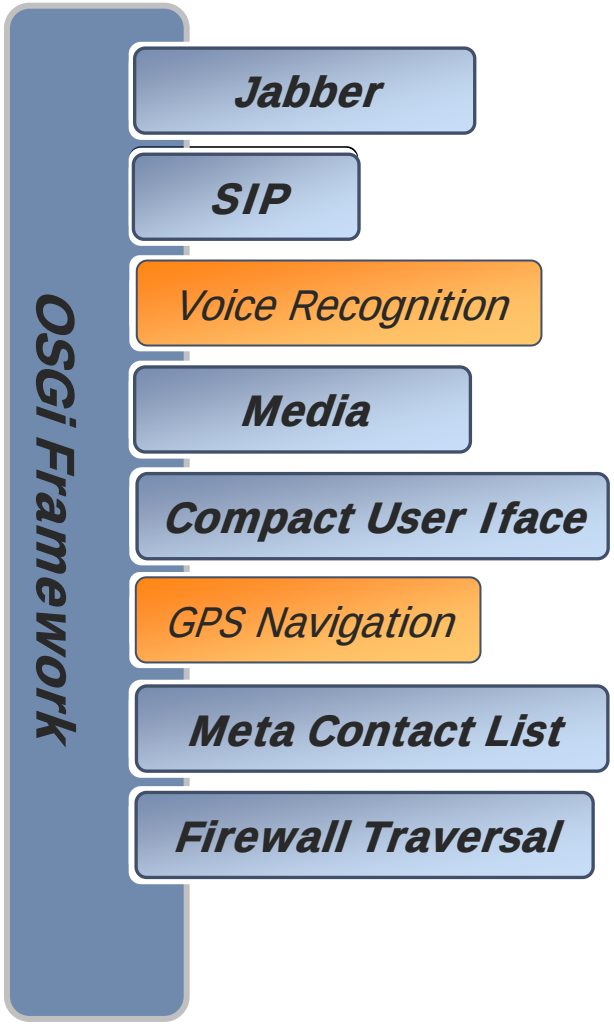
SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

- Modularity & Flexibility – All components of SIP Communicator are implemented as separate, replaceable modules. It is possible to run the application with different sets of features and functionalities depending on the intended user or target platform.

- Extensibility – It is very easy to implement additional features in the form of plug-ins. Developers that are new to SIP Communicator could easily start developing for it since they only need to get acquainted with existing APIs and not the entire source code.

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

A Look Inside – Extensibility



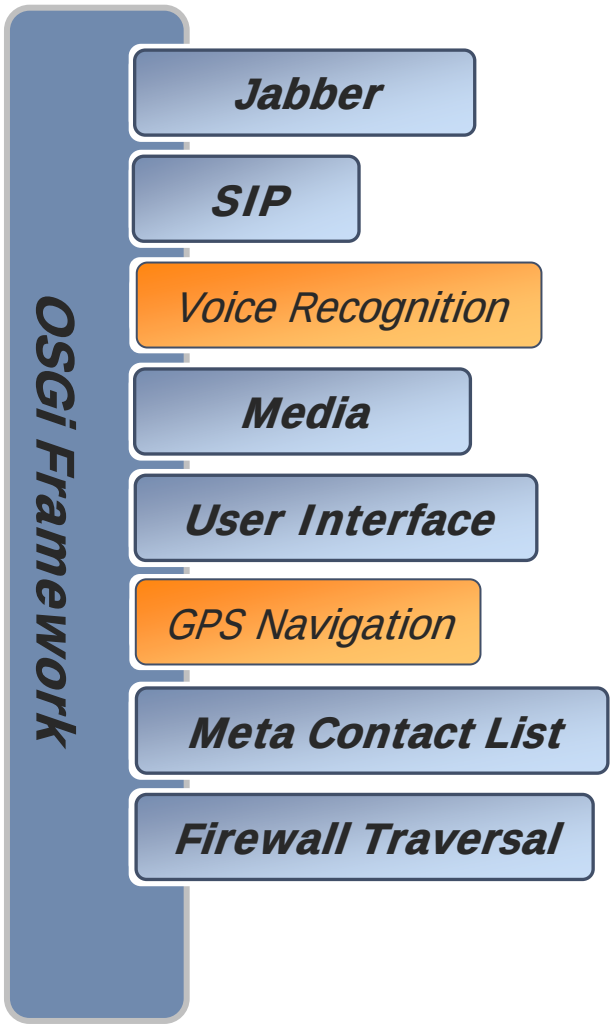
SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

- Modularity & Flexibility – All components of SIP Communicator are implemented as separate, replaceable modules. It is possible to run the application with different sets of features and functionalities depending on the intended user or target platform.

- Extensibility – It is very easy to implement additional features in the form of plug-ins. Developers that are new to SIP Communicator could easily start developing for it since they only need to get acquainted with existing APIs and not the entire source code.

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

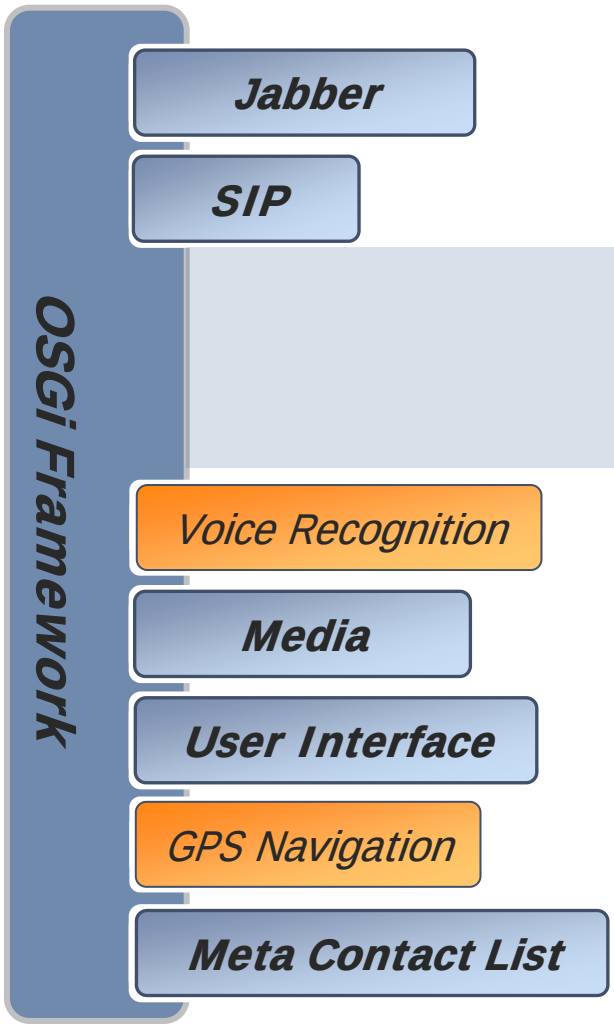
A Look Inside – Deployment and Maintenance



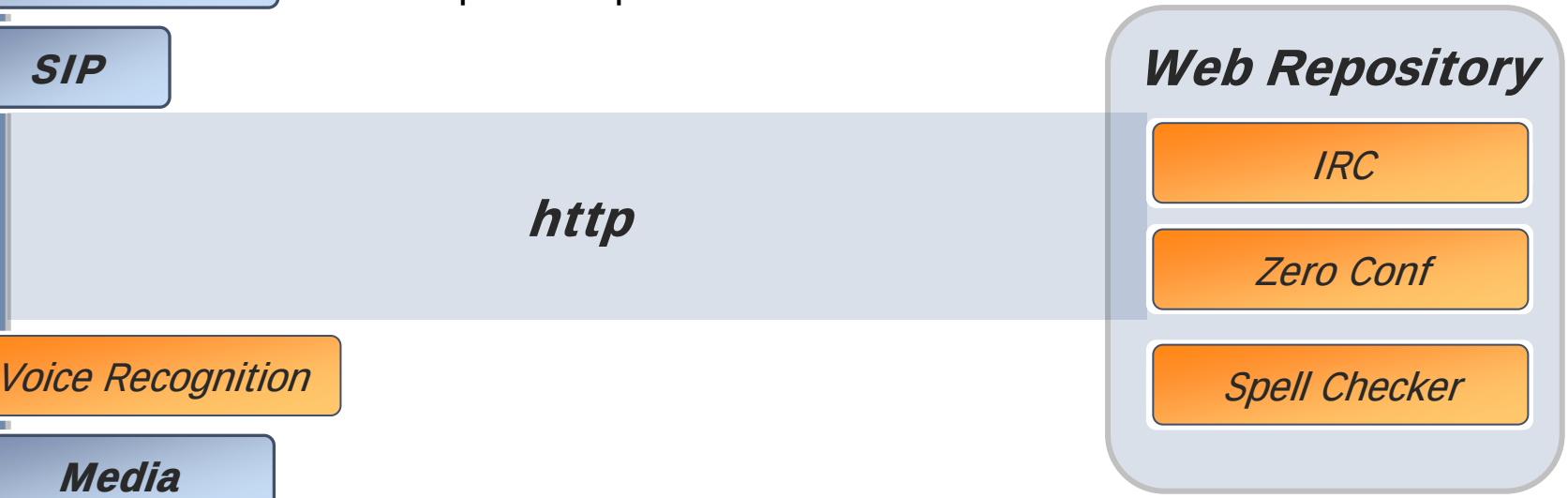
SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

A Look Inside – Deployment and Maintenance

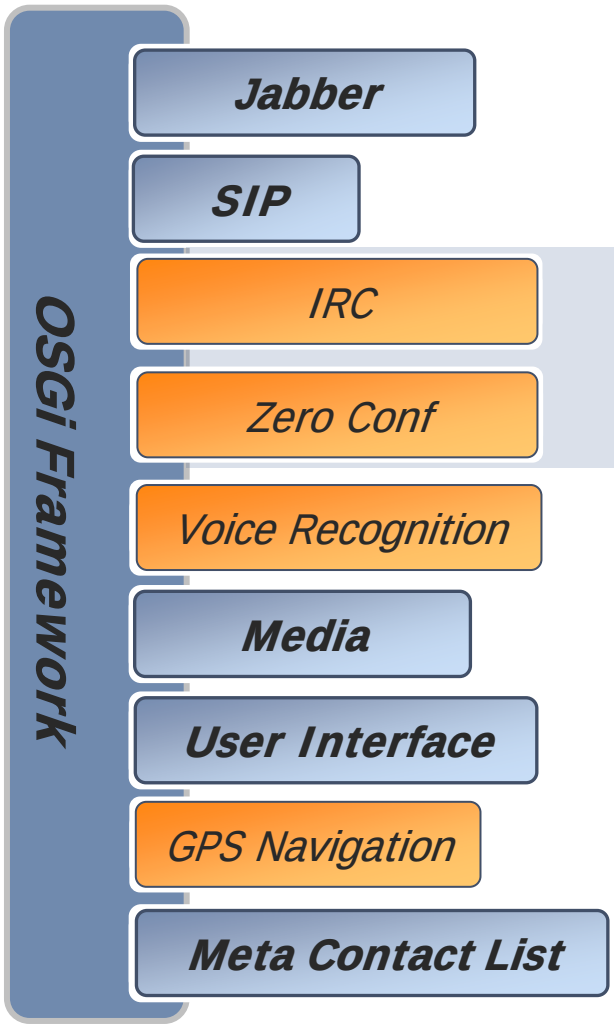


SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:



- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

A Look Inside – Deployment and Maintenance

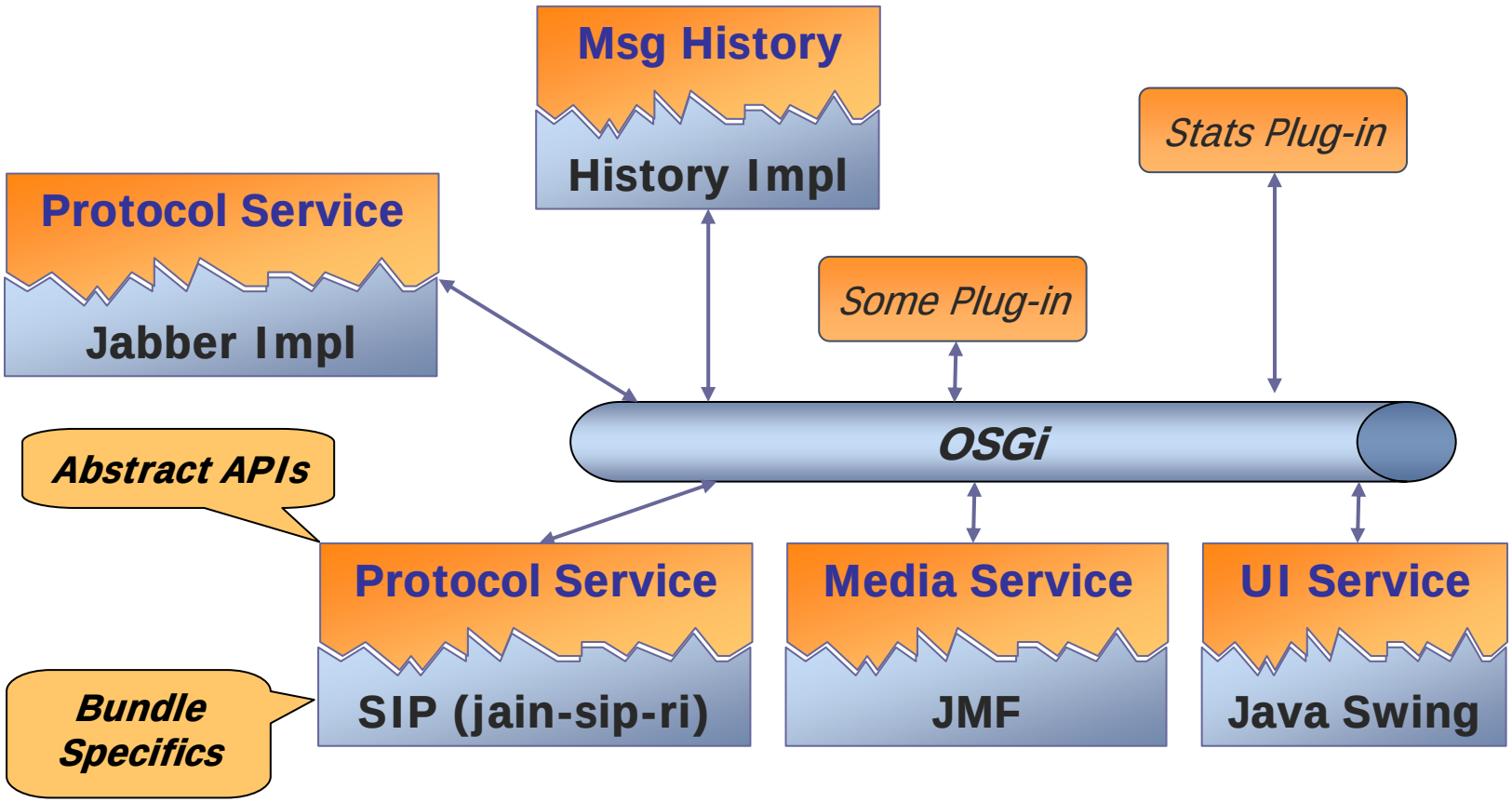


SIP Communicator is built upon the Apache Felix implementation of the OSGi framework. This helps us provide qualities such as:

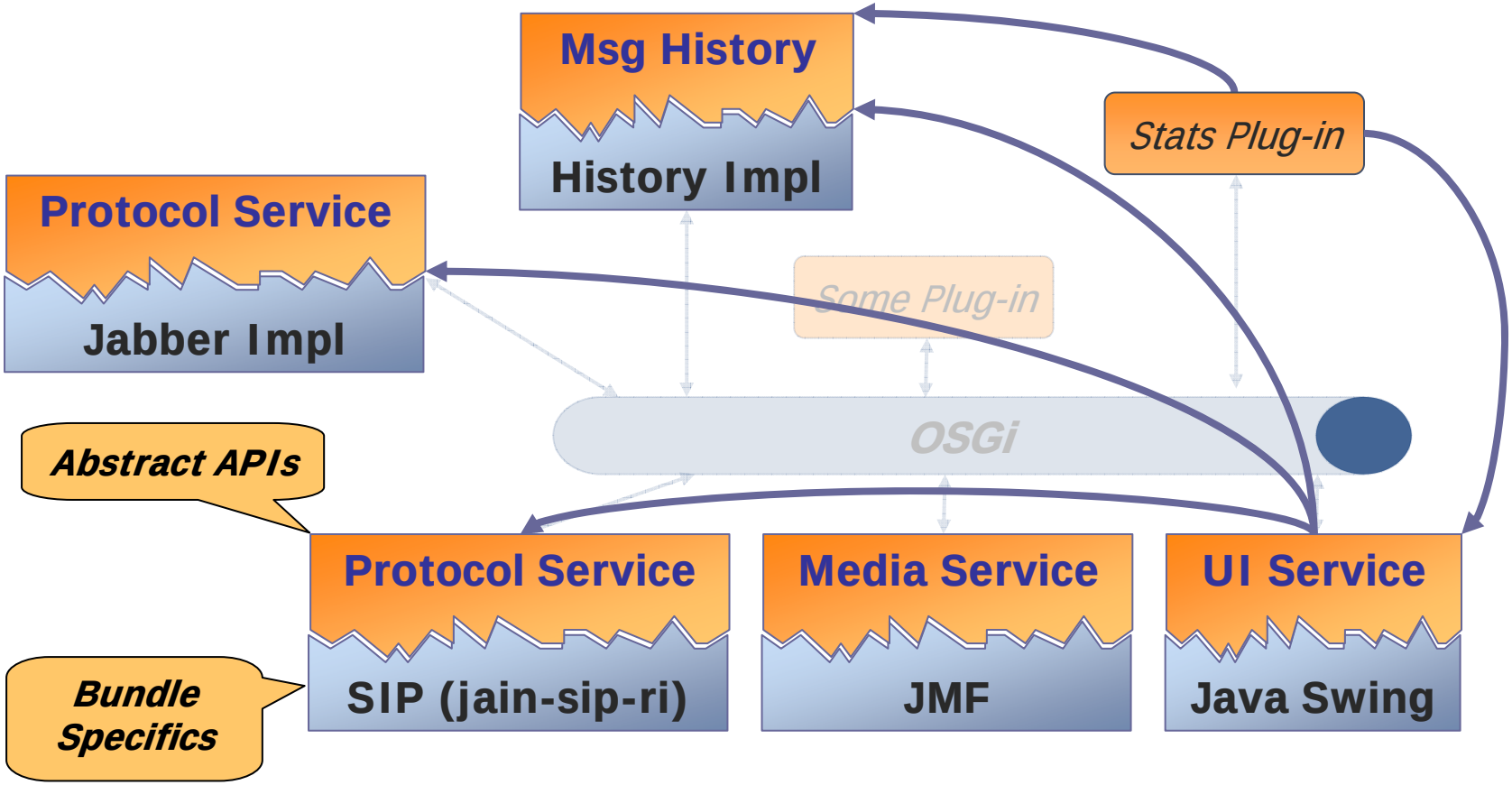
http

- Ease of maintenance and deployment – The concept of an OSGi Bundle Repository allows SIP Communicator users to download, install and configure new plug-ins with a few clicks.

SIP Communicator 1.0 – Application Design

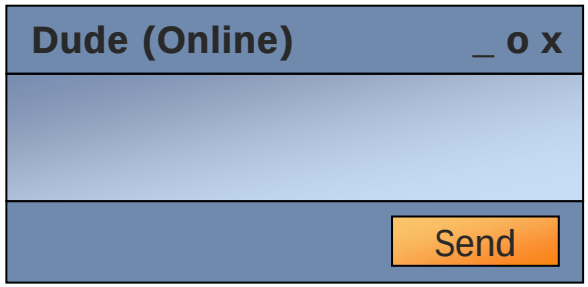


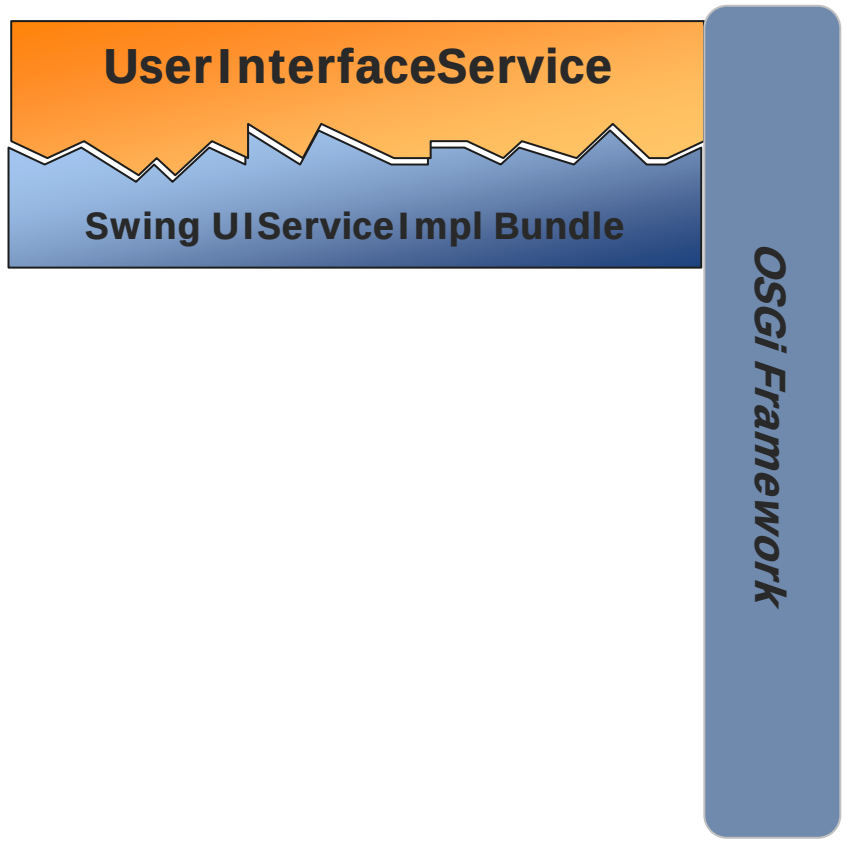
SIP Communicator 1.0 – Application Design

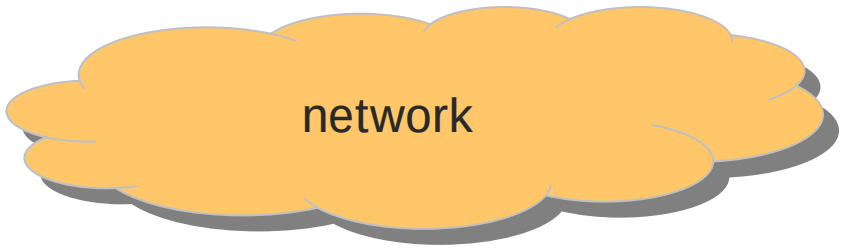


SIP Communicator 1.0 Architecture

A Simple Scenario

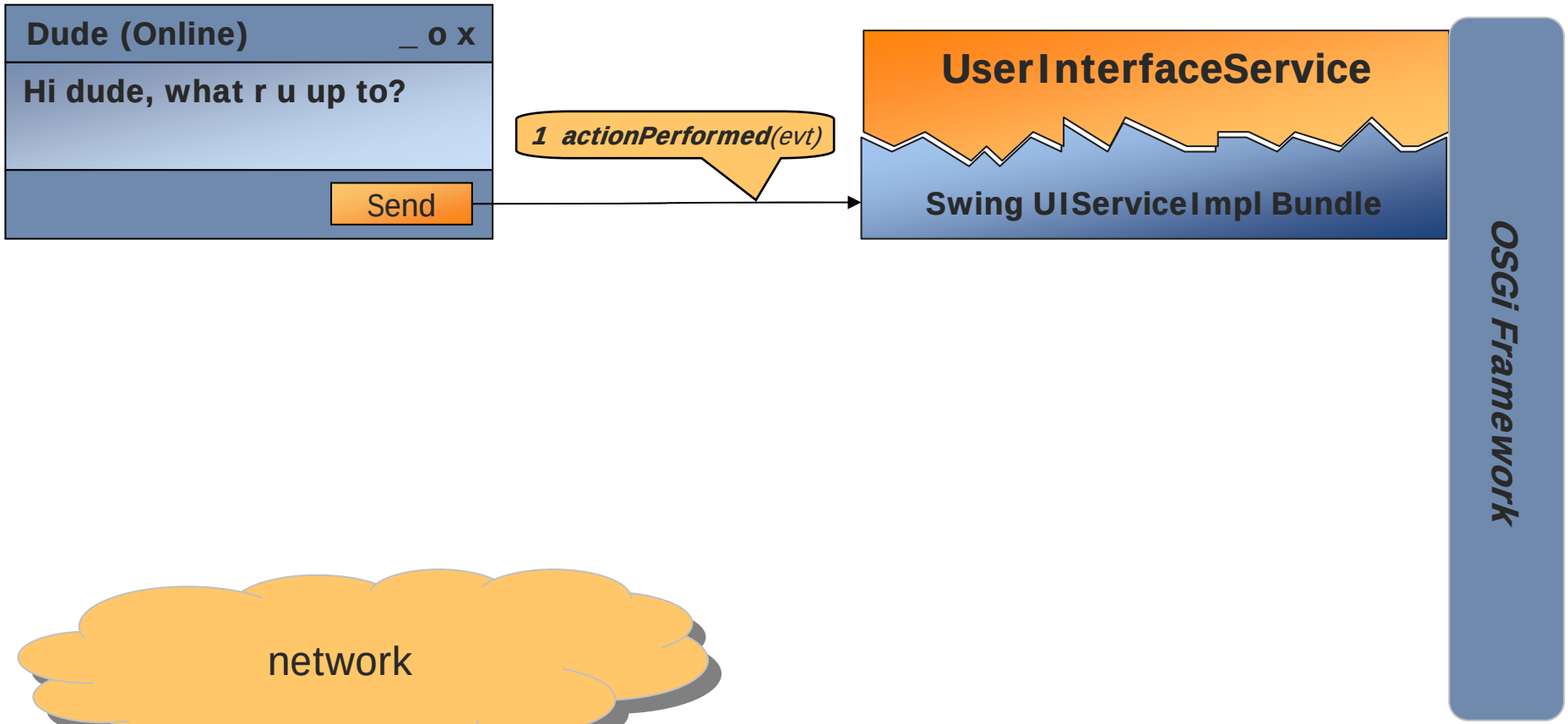






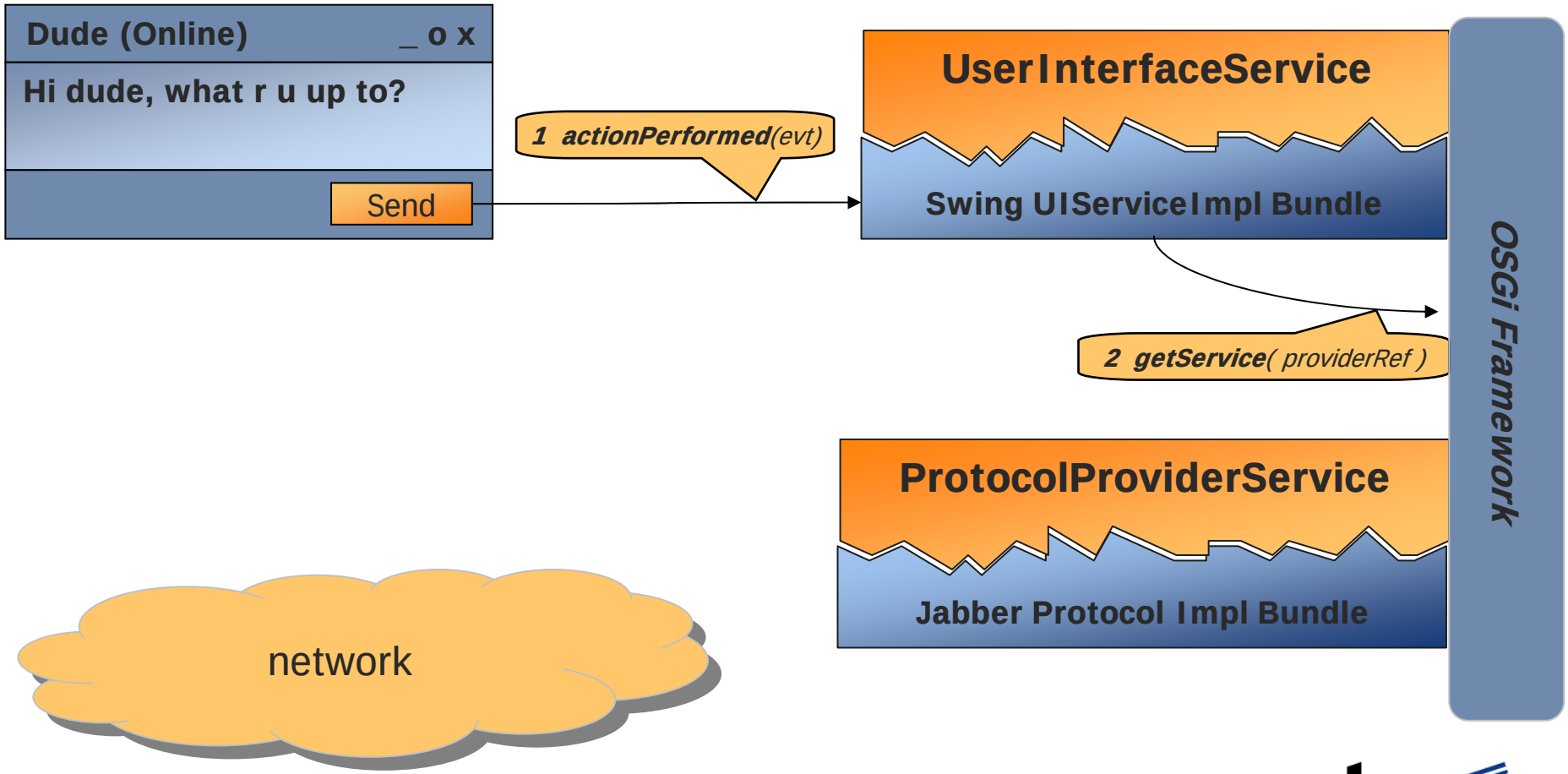
SIP Communicator 1.0 Architecture

A Simple Scenario



SIP Communicator 1.0 Architecture

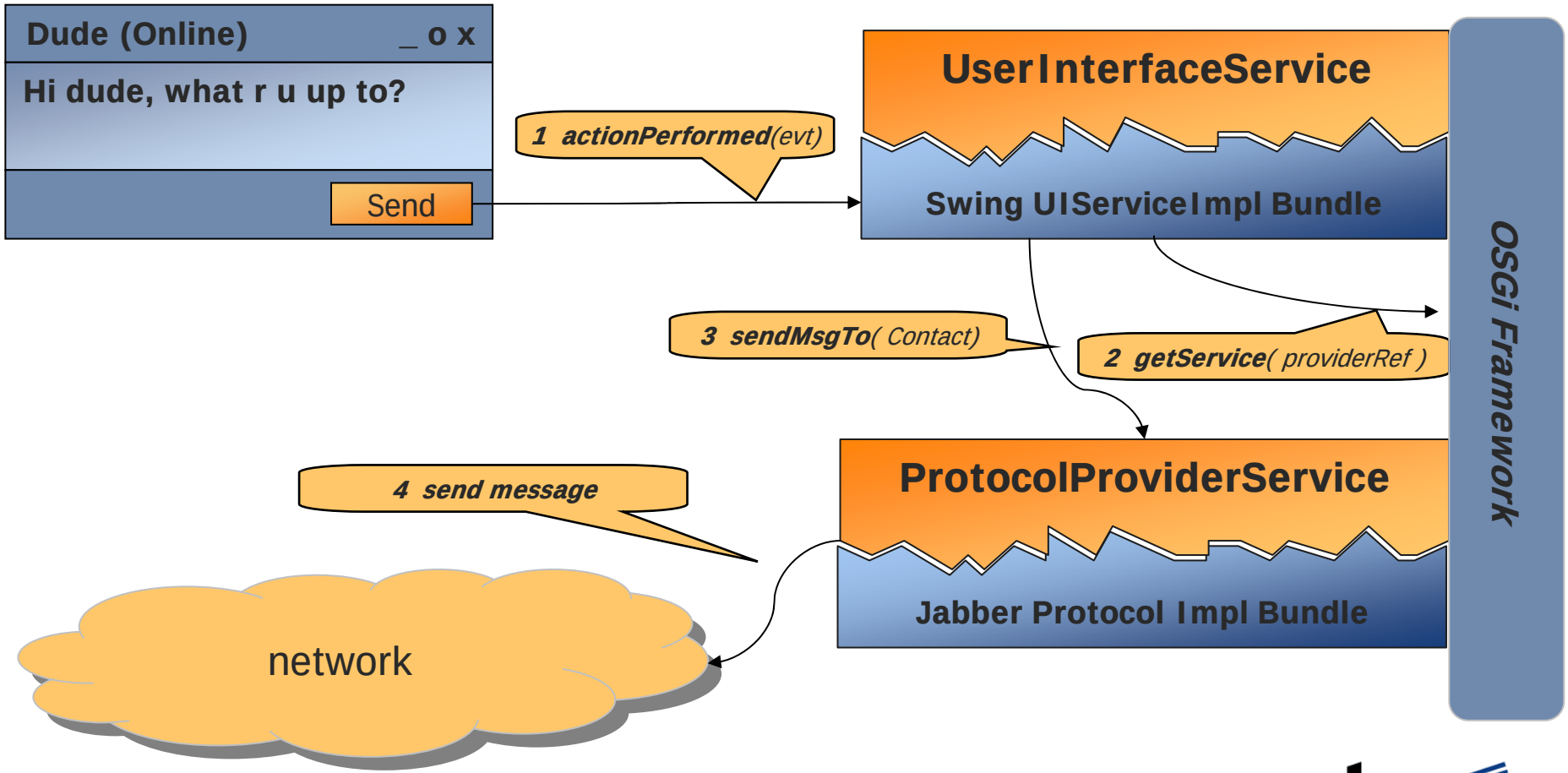
A Simple Scenario



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

SIP Communicator 1.0 Architecture

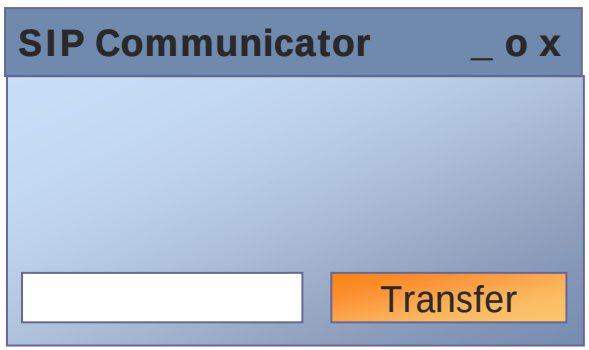
A Simple Scenario



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

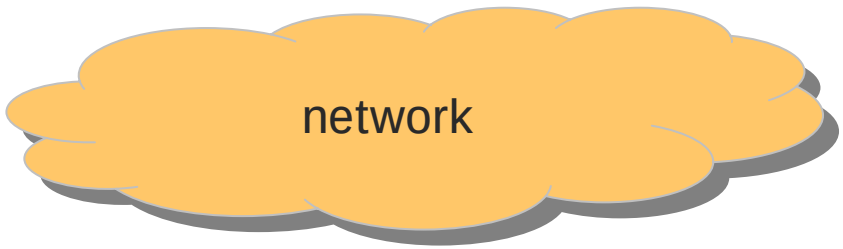
SIP Communicator 1.0 Architecture

A Sligthly More Complex Scenario (1)



CallTransfer Plug-In

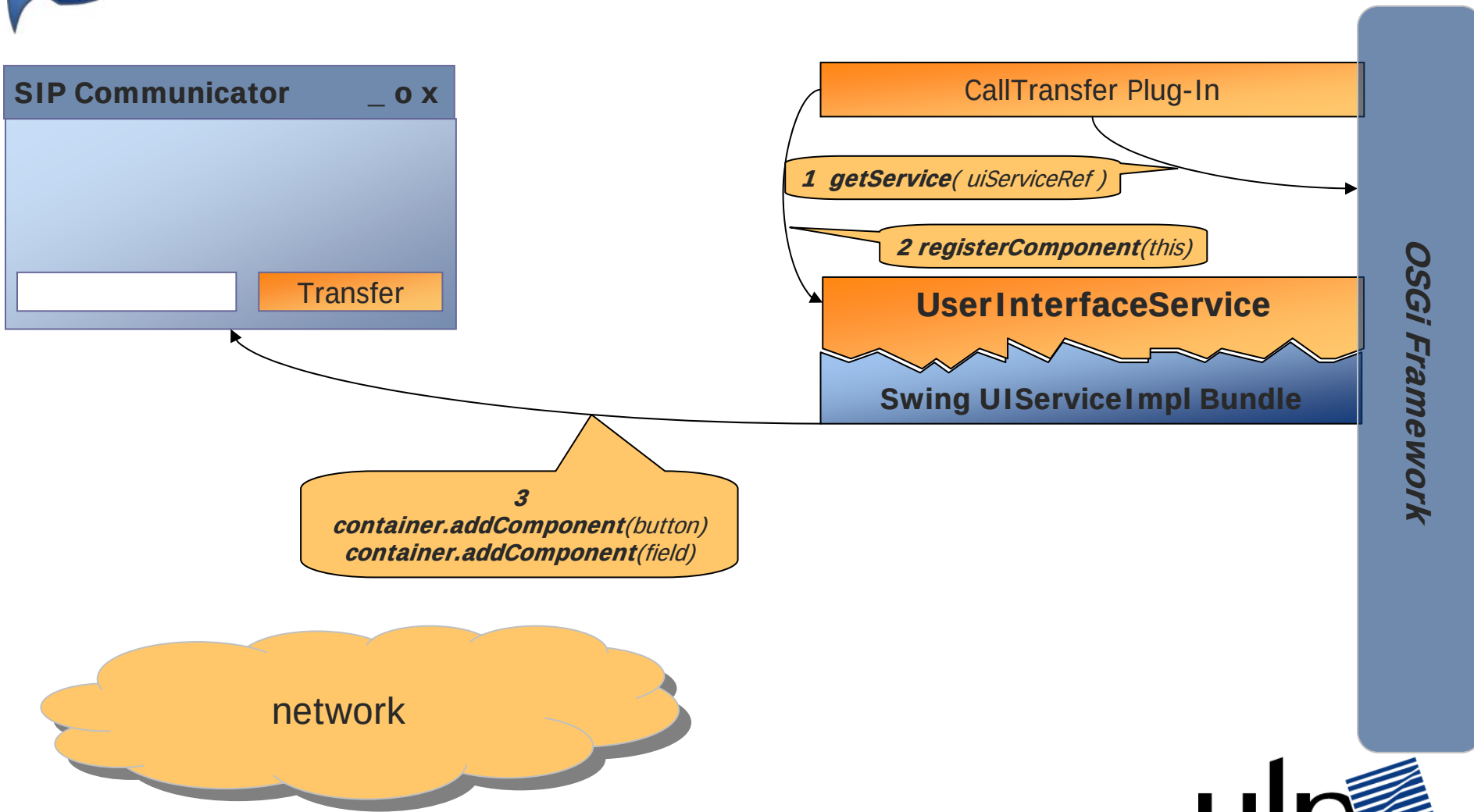
OSGi Framework



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

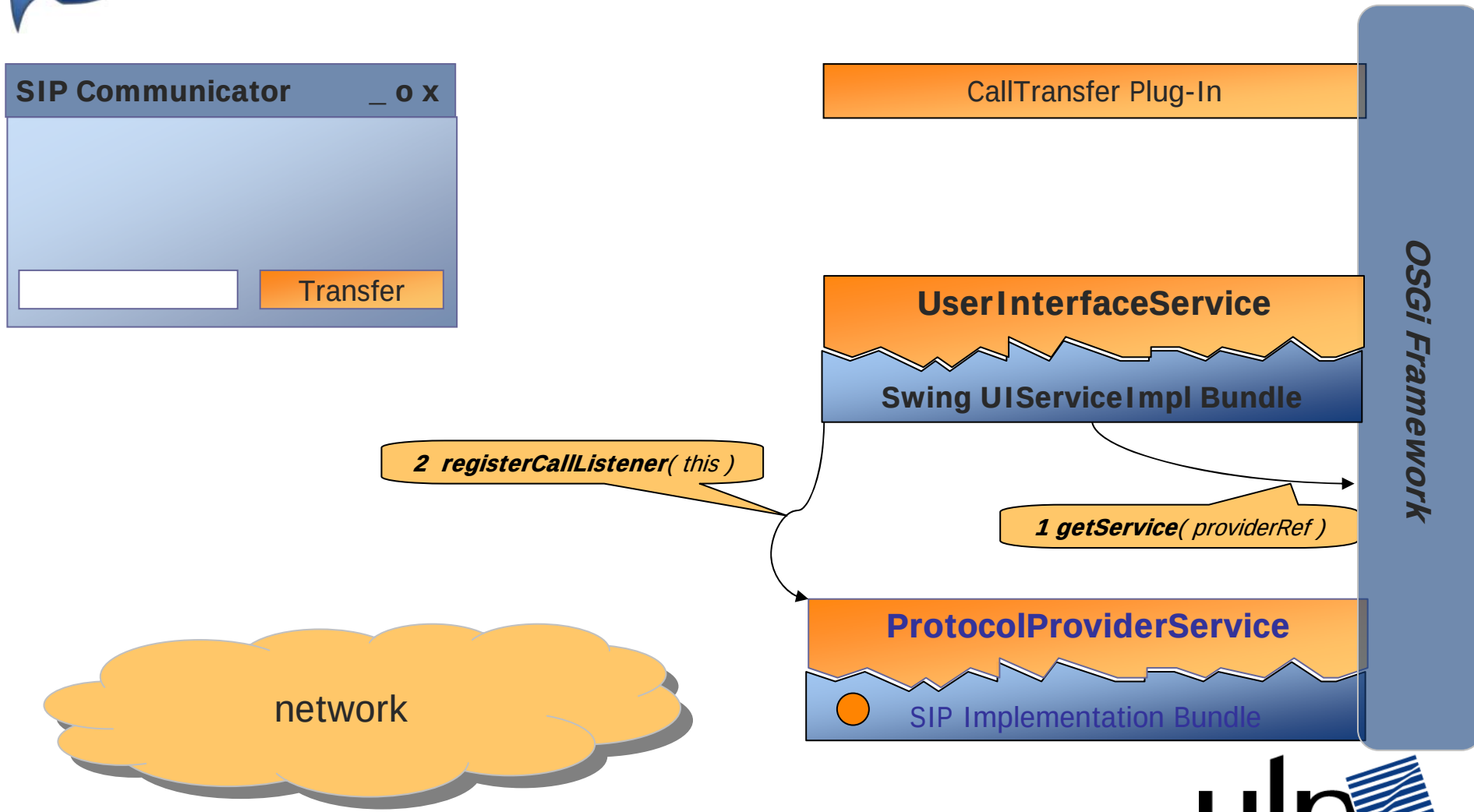
SIP Communicator 1.0 Architecture

A Sligthly More Complex Scenario (1)



SIP Communicator 1.0 Architecture

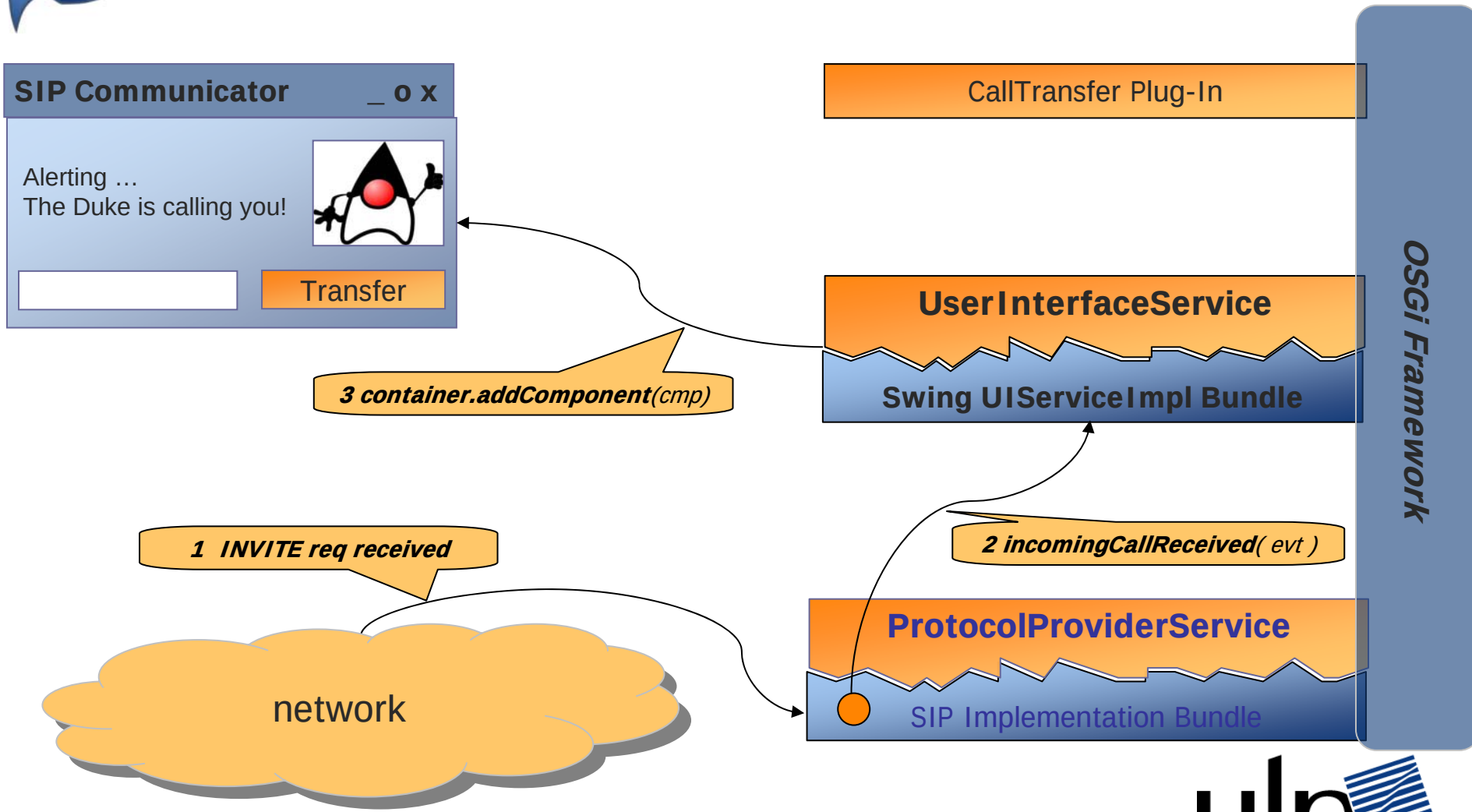
A Sligthly More Complex Scenario (2)



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

SIP Communicator 1.0 Architecture

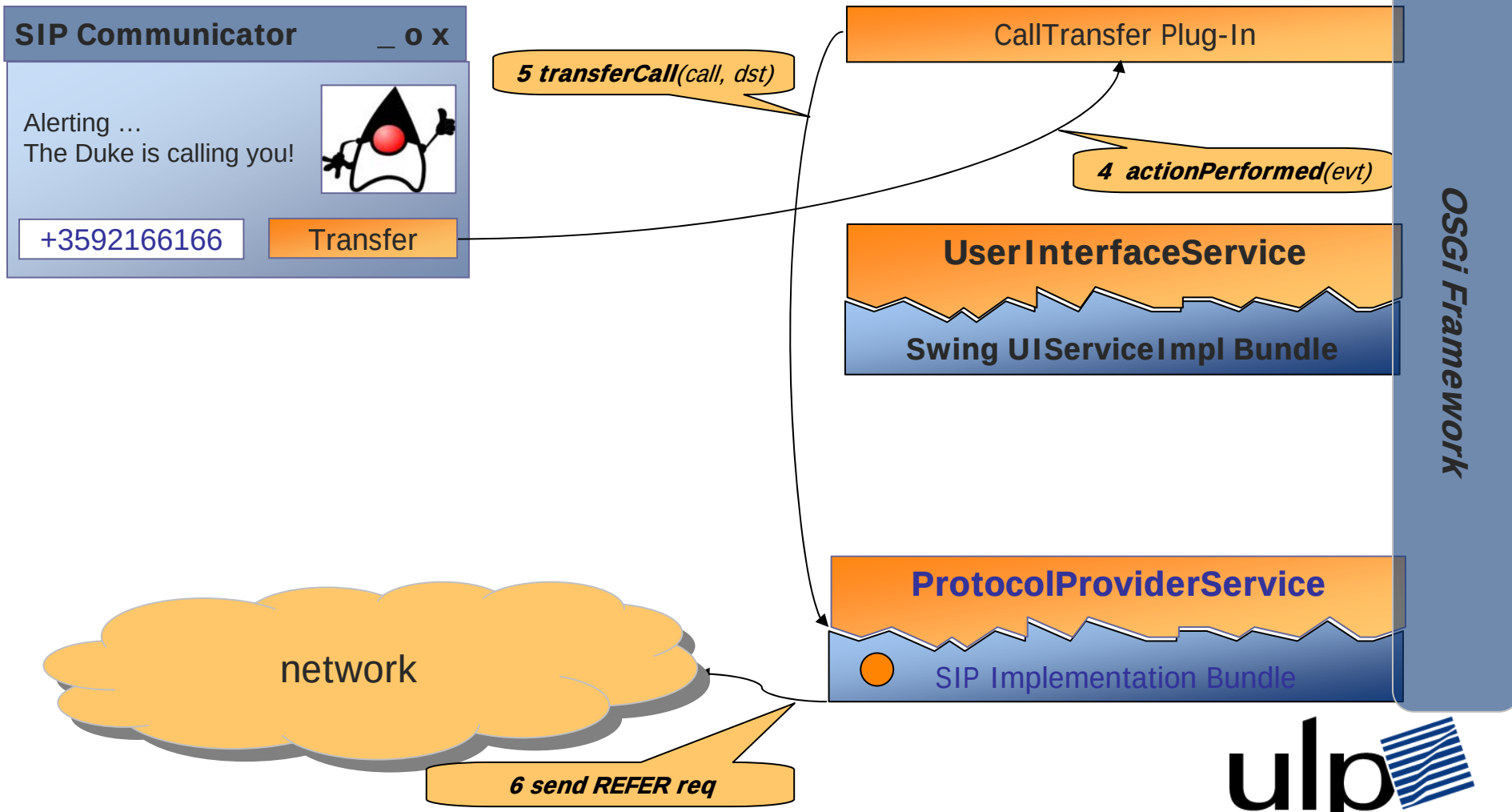
A Sligthly More Complex Scenario (3)



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

SIP Communicator 1.0 Architecture

A Sligthly More Complex Scenario (4)



UNIVERSITÉ LOUIS PASTEUR STRASBOURG

http://sip-communicator.org

SIP Communicator tutorials:

How to create OSGi Services for SIP Communicator:
http://www.sip-communicator.org/index.php/Documentation/CreatingServices

How to write GUI plugins:
http://www.sip-communicator.org/index.php/Documentation/HowToWriteGuiPlugins

How to implement support for your favorite protocol in SIP Communicator:
http://www.sip-communicator.org/index.php/Documentation/HowToImplementProtocols

How to create and maintain a SIP Communicator installer:
http://www.sip-communicator.org/index.php/Documentation/HowToBuildAnInstaller