



## EventStudio 4.0, IMS Registration, IMS Call Flow, Inter MSC Handover and more

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### [EventStudio System Designer 4.0](#) new

EventStudio 4.0 is a major upgrade with over 30 new features:

- Color, formatting, image and font customization with style specifications
- FDL preprocessor with macros and include files
- FDL enhancements
  - Joint actions
  - Bi-directional messages
  - Object interaction modeling with invokes and returns statements
  - Goto support
  - Periodic timer
  - Message chains
- Custom paper sizes
- Theme support
- Single click document save, generation and display
- [More](#)

### [IMS Registration Sequence Diagrams](#) pdf new

IP Multimedia Subsystem (IMS) registration is described in detail. The complicated flow is dissected into several flows that cover different aspects of the IMS registration sequence.

The interactions covered are:

- Terminal attaching to the GPRS Network.
- Terminal activates a PDP context.
- An unauthenticated IMS registration is attempted.
- IPSec security association is established between the User terminal and the P-CSCF.
- Finally the terminal performs an IPSec protected registration that completes the authentication of the network and the terminal.

### [IMS Subscriber to IMS Subscriber Call Flow](#) pdf new

A detailed IMS subscriber to IMS subscriber is presented here. The preconditions for this call flow are:

- The calling IMS subscriber is currently roaming outside the home network.
- The called user is registered in the home network.
- The caller and the called user require resource reservation before the call can be setup.

The major steps in the call flow are:

- IMS routing of the initial SIP INVITE.
- IMS routing of the first response to the INVITE.
- Resource allocation via PDP context activation.

### [SDP Codec Selection and QoS Signaling in an IMS call](#) pdf new

Session Description Protocol (SDP) specifies a format for exchanging streaming related parameters between

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SIP subscribers.

This call flow focuses on the SDP interactions between two IMS subscribers. The flow covers two phases of the SDP negotiation:

- Codec selection between the calling and call IMS subscribers.
- SDP signaling involved in exchanging quality of service information.

[Sequence Diagram Tutorial](#) pdf new

A new tutorial describes automatic generation of sequence diagrams from the latest release of EventStudio. The tutorial includes detailed steps on getting you started with system modeling with sequence diagrams.

[GSM Inter-MSC Handover Call Flow](#)  
pdf updated

Handing over a GSM call is a complicated procedure. It is even more so when the source and target GSM cells are controlled by different MSCs. The following call flows analyze the different steps involved in a inter-MSC handover:

- The source BSC analyzes the signal quality measurement reports and initiates a handover.
- The source MSC finds that the call needs to be handed over to a cell controlled by a different MSC.
- The source MSC and target MSC interact and then command the UT to move to the new cell.
- The target MSC informs the source MSC when the call has been successfully handed over.
- The source MSC releases the radio resources for the call. Note that the call is still routed via the source MSC.

[Open Closed Principle](#) updated

The open closed principle of object oriented design states:

*Software entities like classes, modules and functions should be open for extension but closed for modifications.*

The Open Close Principle encourages software developers to design and write code in a fashion that adding new functionality would involve minimal changes to existing code. Most changes will be handled as new methods and new classes. Designs following this principle would result in resilient code which does not break on addition of new functionality.

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