

# Isabel Reference Handbook

Isabel 4.10



Agora Systems S.A.

C/Velázquez, 50, 6º drch

28001 Madrid (Spain)


Fax.: +34 91 588 86 82

Email: [agora-2000@agora-2000.com](mailto:agora-2000@agora-2000.com)

Web: <http://www.agora-2000.com>

October 2006

v1.1

Isabel Reference Handbook	
November 2005	

## Table of contents

1. Introduction.....	4
2. What is Isabel? .....	4
3. Isabel architecture.....	5
4. The Isabel Menu.....	7
4.1. Help .....	8
4.2. Utilities .....	8
4.2.1. License Manager.....	10
4.3. Connect to session... ..	11
4.4. Edit Local Configuration.....	12
4.4.1. Site identification.....	12
4.4.2. Role.....	13
4.4.3. Multicast .....	13
4.4.4. Media controls .....	14
4.4.5. Additional parameters.....	14
4.4.6. Forward Error Correction (FEC) .....	15
4.4.7. Administrative info.....	15
4.4.8. Profiles.....	15
4.5. Local test .....	16
4.6. Start Session Server .....	16
4.7. Stored sessions.....	17
5. Isabel components.....	18
6. Isabel “terminology” .....	19

Isabel Reference Handbook	
November 2005	

Isabel Reference Handbook	
November 2005	

## 1. Introduction.

This handbook is intended to be the Isabel's reference guide, a document with a wide scope where the user can refer to solve specific doubts. In this document the reader will find the explanation of all the functions available from the Isabel menu, how to create and connect to sessions and the definition of a wide set of terms used in the Isabel documentation. It also summarizes the features of the three basic services in Isabel (Telemeeting, Teleclass and Teleconference).

## 2. What is Isabel?

ISABEL is a **group collaboration tool for the Internet** which allows efficient organisation of working procedures over private VPNs, the public Internet or the next generation Internet, allowing timely organization of meetings or training sessions. The use of ISABEL leads to a increase of productivity and reduction of lead times in organizations, groups or projects.

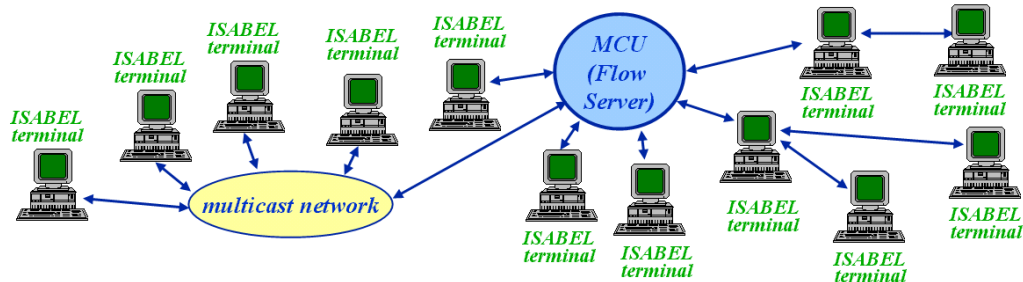
ISABEL uses an **innovative service concept**, which adapts collaboration sessions to the user needs, including various service definitions. Each service supports the specific behaviours of a given set of users, having specialized support for:

- Tele-meeting: for project and corporate meetings.
- Tele-class: for corporate training or distance learning.
- Tele-conference: for congresses, workshops or large corporate meetings.
- Tailored services for specific needs of a customer.



Isabel uses TCP-UDP over IPv4 and IPv6, supporting a rich variety of mixtures of networking technologies, such as LANs, ATM, ISDN, Frame Relay, satellite, etc.

Isabel Reference Handbook	
November 2005	



ISABEL has several distinguishing features over standard videoconferencing. It is a software technology which transforms a PC into advanced conferencing terminals or Multipoint Control Units (MCU). ISABEL terminals include an MCU to connect other terminals to a session.

### 3. Isabel architecture.


When participating in a distributed event through Isabel CSCW, each participant has to join in a **session**. The **session** is the context where participants meet each other, and differentiates one meeting from another. Isabel sessions are composed by a set of **Isabel terminals** connected following a certain **topology**.

An **Isabel terminal** is a computer (PC) where the Isabel CSCW application has been deployed plus all the additional hardware necessary to run Isabel (audio and video hardware, network hardware,...). The **topology** is the way the terminals are connected together plus their role in the session.

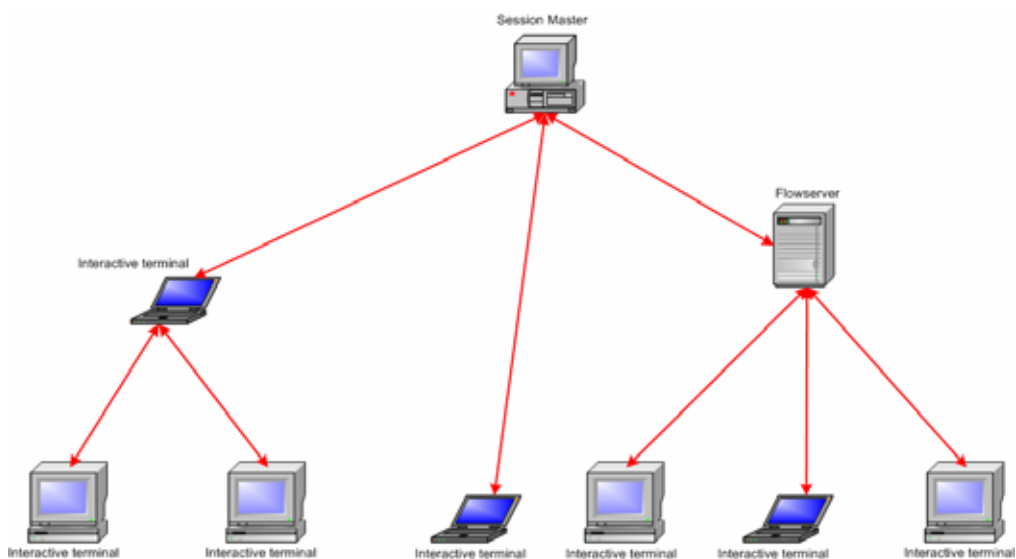
The topology in Isabel sessions is tree-based, so it will have a root, interconnecting nodes and final nodes. The topology is defined by the event's organizer and it is transparent to participants.

The **role** is the function that a terminal fulfils. There are several roles a terminal can fulfil in the session topology. The most important roles are:

- **Flowserver:** Flowservers are Isabel terminals concerned about distributing control and multimedia flows. These terminals are used to distribute to other leafs the flows coming from a terminals, acting as a union node in the tree topology. This role enhances the scalability of session topologies.
- **Interactive Terminal:** An interactive terminal is a PC running Isabel, which enables the access to a remote Collaboration Session. This is the role that would be running in the terminal of a participant in a session. This guide will lead you to correctly setup an Isabel interactive terminal.
- **Gateway:** Gateways are specific terminals deployed to transform Isabel sessions to other videoconference standards, such as SIP, H323, Skype,... They are not part of Isabel, but deployed on demand.

Isabel Reference Handbook	
November 2005	

There is another role which can be played in addition of the Interactive and Flowserver roles: the Session Server role. Session Master or just Master are sometimes used to refer to this same concept. The Session Server is the coordinator of a session, which defines the overall characteristics of the platform built around it, such as link bandwidth and technology, type of service used in the session, etc... The Session Server must be up for the rest of participants to connect. Once the Session Server is started, all sites can connect and disconnect from the event as needed. This Server can be a dedicated terminal (that is, a Flowserver) or an Interactive terminal. As session's topology is tree based, the Session Server is the root of the tree. Only and only one Server is required in an Isabel session, which will be set up by the event organizer.



When you want your terminal to join a session you will need the **session URL**, which indicates the Isabel terminal where to find all the information concerning the session. Indicating an URL to your terminal will make it to automatically join a session. This URL has the following format.

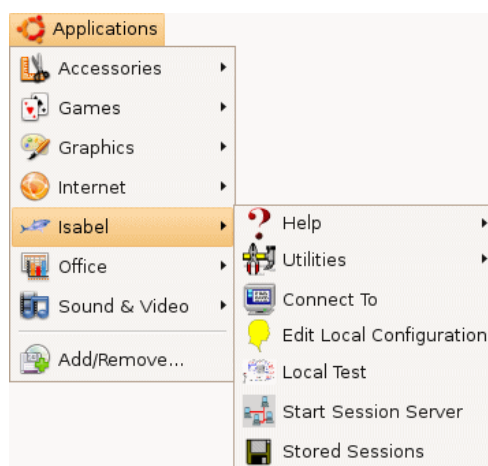
***isabel://hostname/session\_name***

where *hostname* is the name of a terminal which is already connected to the session (typically the Session Server or a Flowserver), and *session\_name* is the name of the session you want to your terminal to join. The *hostname* can also be the IP address of the terminal and the *session\_name* can be omitted (meaning “the running session”) as a terminal can only participate in one session simultaneously.



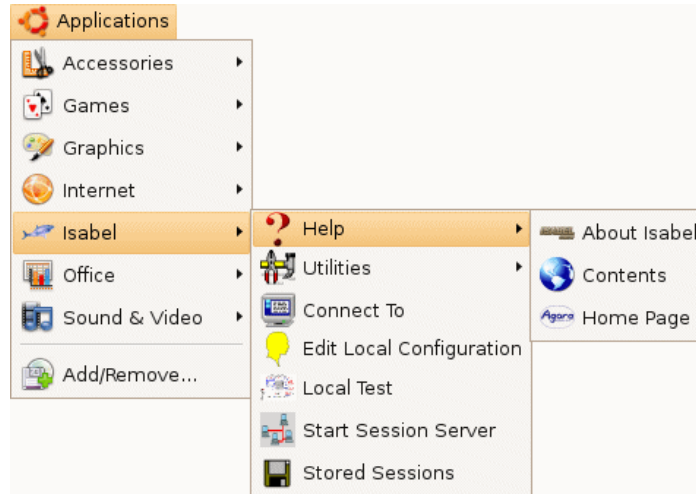
## 4. The Isabel Menu.

The Isabel menu is available in the Ubuntu Applications menu, in the upper-left part of the desktop.





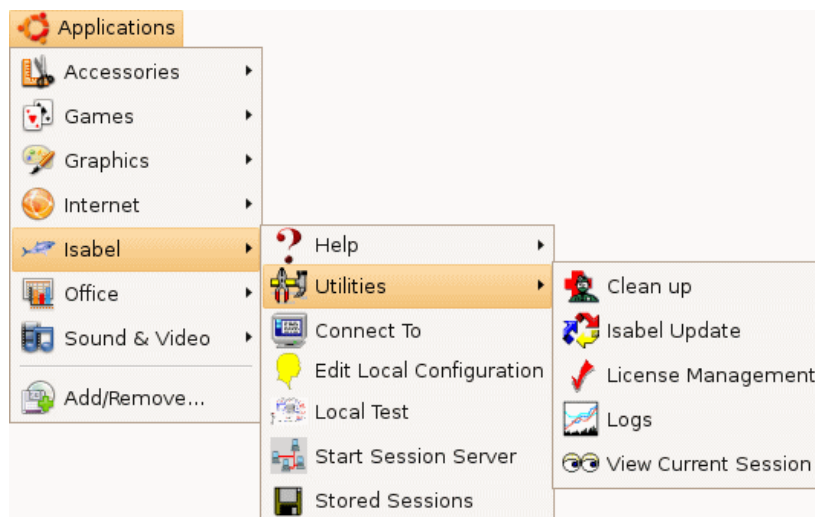
## 4.1.Help



The Help menu has three options:

- **About Isabel:** shows a dialog with information about the version of the Isabel installed packages.
- **Contents:** shows the technical documentation for Isabel.
- **Home page:** opens the Agora Systems home web page.

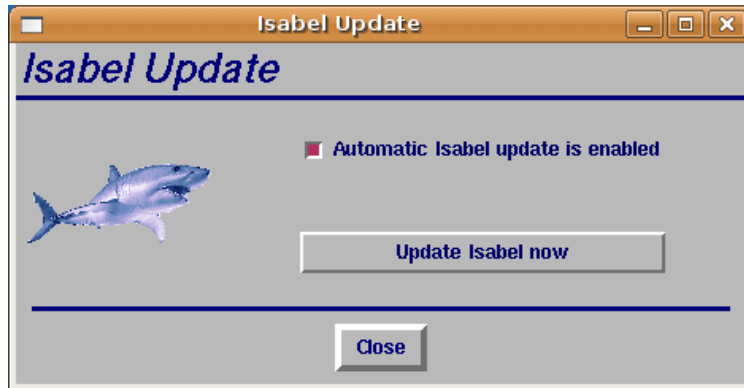
## 4.2.Utilities



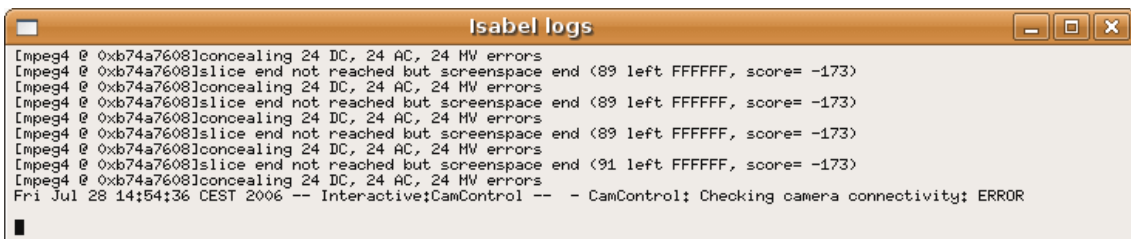
The Utilities menu has five options:

- **Clean up:** when Isabel exits abruptly, some rests may remain in the computer. This option removes those rests.

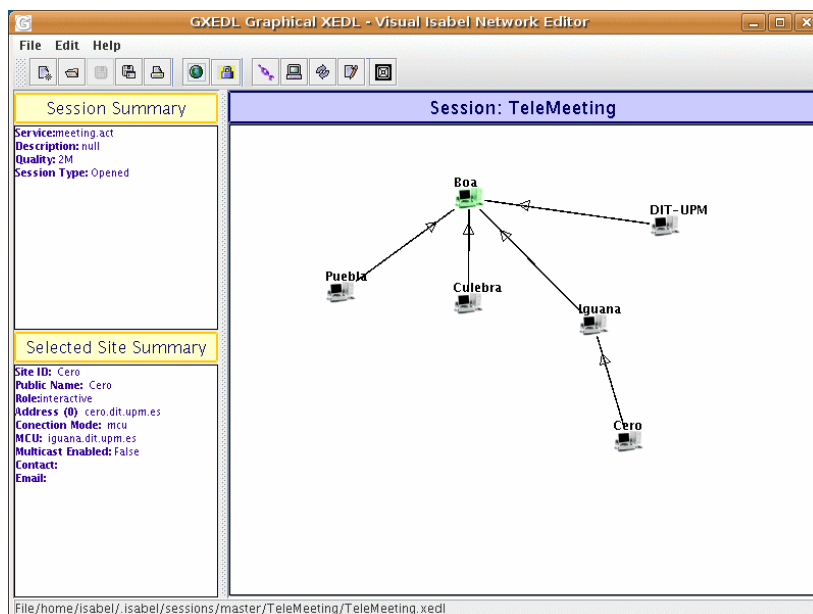
- Isabel update: this options activates/deactivates the automatic update to new Isabel versions




- License management: opens the License Manager, which will be explained in depth later.
- Logs: shows the textual logs of Isabel, useful to debug network errors, hardware problems,...



- View current session: opens the graphical XEDL editor showing the current Isabel session



Isabel Reference Handbook	
November 2005	

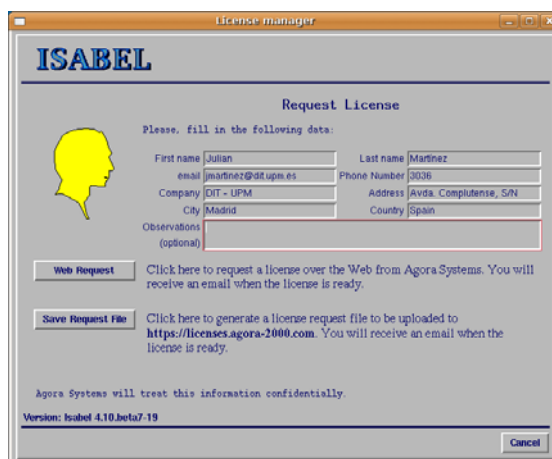
## 4.2.1. License Manager


Isabel terminals do not need a license to run; only the Session Server needs a license for up to N clients to connect. The standard Isabel distribution includes a demo license that can be used to run a Session Server for evaluation purposes. However, if you want to run a Session Server with a commercial license, you must request and install such license. Licenses are managed through the License Manager. The main window has three options:

- Request license.
- Install license.
- Reinstall DEMO license. This option removes the license currently installed in your terminal and reinstalls the shipped demo license.



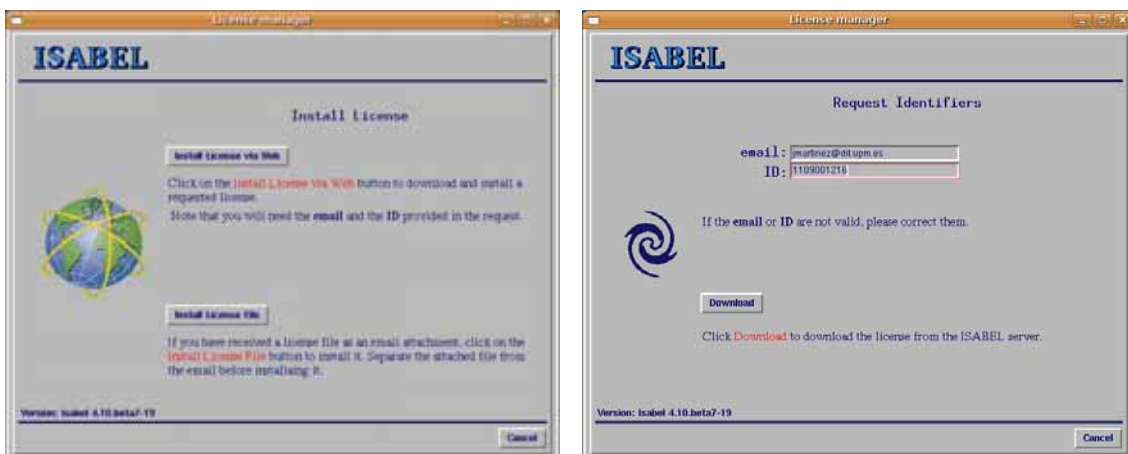
To request a license, fill in the data and click in one of the buttons. The “Web request” button gathers some information from your hardware and sends it via web to the Agora License Server. Once the license is ready, you will be mailed with information to install it. The “Save request file” does the same, but saves the file locally, to let you send it by email or upload to the Agora License Server by hand.



Isabel Reference Handbook	
November 2005	

Once the request is ready, you will receive an ID that you should write down.

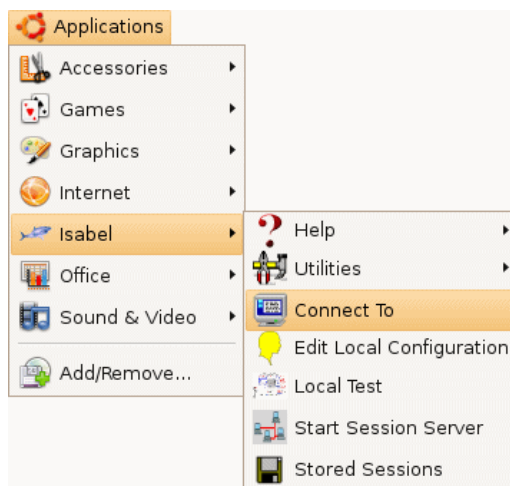
Once the license is ready, you will receive an email saying so (or even an email including the license itself).



To install the license via web, you will need to type the email and the ID that was provided before. If the license is ready, it will be downloaded and installed in your terminal.

### 4.3. Connect to session...

To connect to an existing session select “Isabel→Connect to”.



The “Connect to session” window will spawn.



**Connect To Session...**

**Session Information**

URL or IP \* :    
*URL Format:* isabel://ip\_address/session\_name  
*Example 1:* isabel://flow.dit.upm.es/EURO6IX  
*Example 2:* 138.4.2.10  
*Example 3:* machine.mydomain.com

Password:

**Terminal Information**

The personal data below will identify you in this session. The nickname must be unique in the session.

Nickname\*  (e.g. MIT, UPM, NASA...)  
 Location:  (e.g. Madrid, Berlin, New York...)  
 Profile:

\* mandatory fields

Type the session URL and type, if needed, your nickname and location. Then click on the “Connect” button to join the session. You can also select from the “URL” field a session your terminal has previously joined.

## 4.4.Edit Local Configuration

This option opens the Local Configuration window, with several tabs.

### 4.4.1.Site identification

**ISABEL Options : Default**

ISABEL Options Profile:

Site ID Role Multicast Media Ctrls Parameters F.E.C. Admin. Info

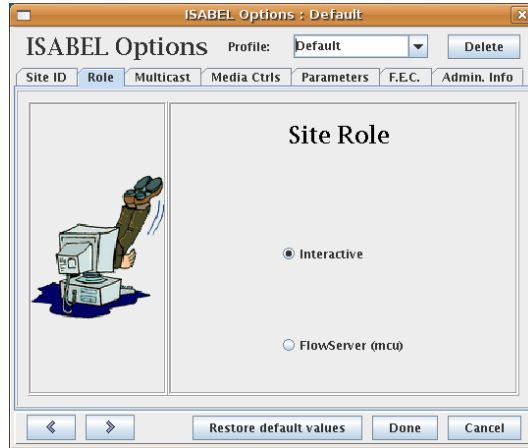
**Site Identification**

Nickname   
 Location

Fill in here the nickname of the terminal and the location. The nickname must be unique in the session, and the location should be meaningful, so you should coordinate it with the session organizer.

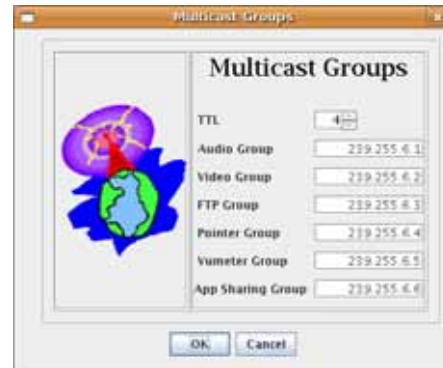
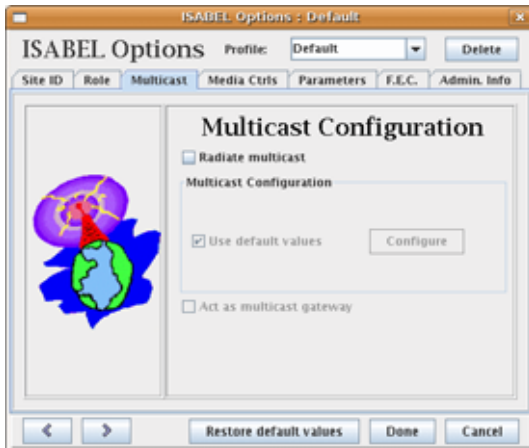


### 4.4.2. Role



Choose if the terminal is going to act as Interactive or as Flowserver. If you do not know what to choose, choose Interactive.

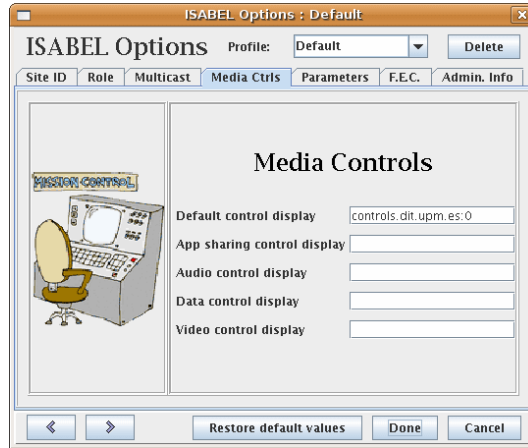
### 4.4.3. Multicast



Configure the multicast groups here. If the “Act as multicast gateway” is checked, the terminal will be the parent of the multicast cloud.

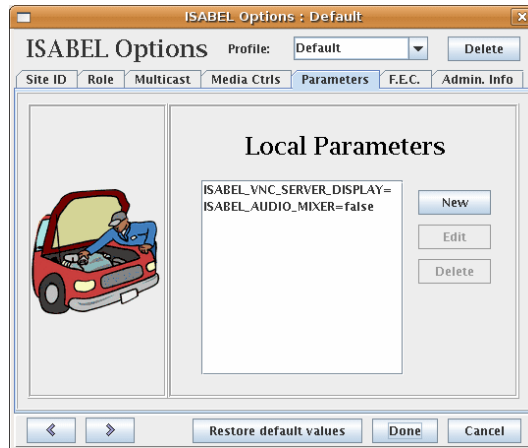


### 4.4.4. Media controls



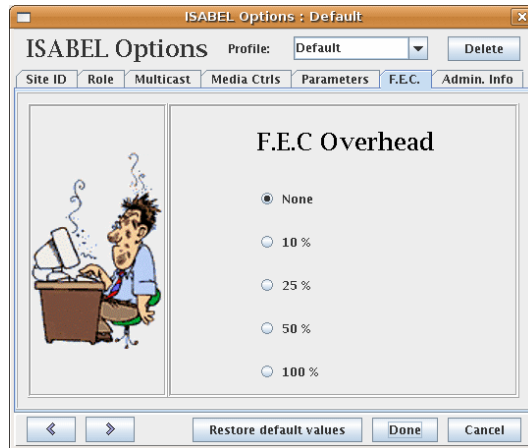
If one or more of this fields are filled, the corresponding windows are sent to the given X-window display.

### 4.4.5. Additional parameters



Some activities may require additional parameters here.

#### 4.4.6. Forward Error Correction (FEC)



If the IP link has some losses (not due to congestion), some error correction can be achieved by the mean of introducing some overhead.

#### 4.4.7. Administrative info

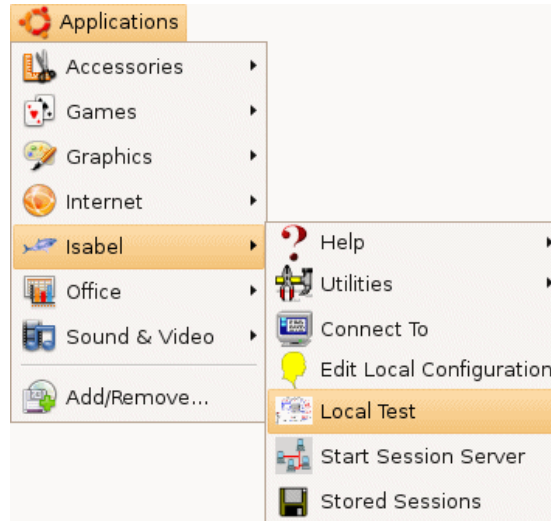


Fill in here some optional administrative information.

#### 4.4.8. Profiles

Profiles are used to change between different Local Configurations quickly. Usually the Default profile is enough, but new profiles can be created just typing a profile name. Use the selector to choose the active profile, and click on Delete to delete the chosen profile.

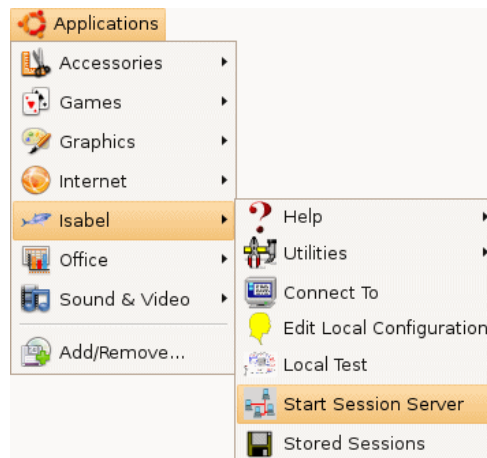
## 4.5. Local test



This option starts Isabel in a test mode which is used during the “Test and setup” phase. See the “Participant’s Guide” for more information.

## 4.6. Start Session Server

To start a session from your terminal, select “Isabel → Start Session Server” from the Isabel menu.

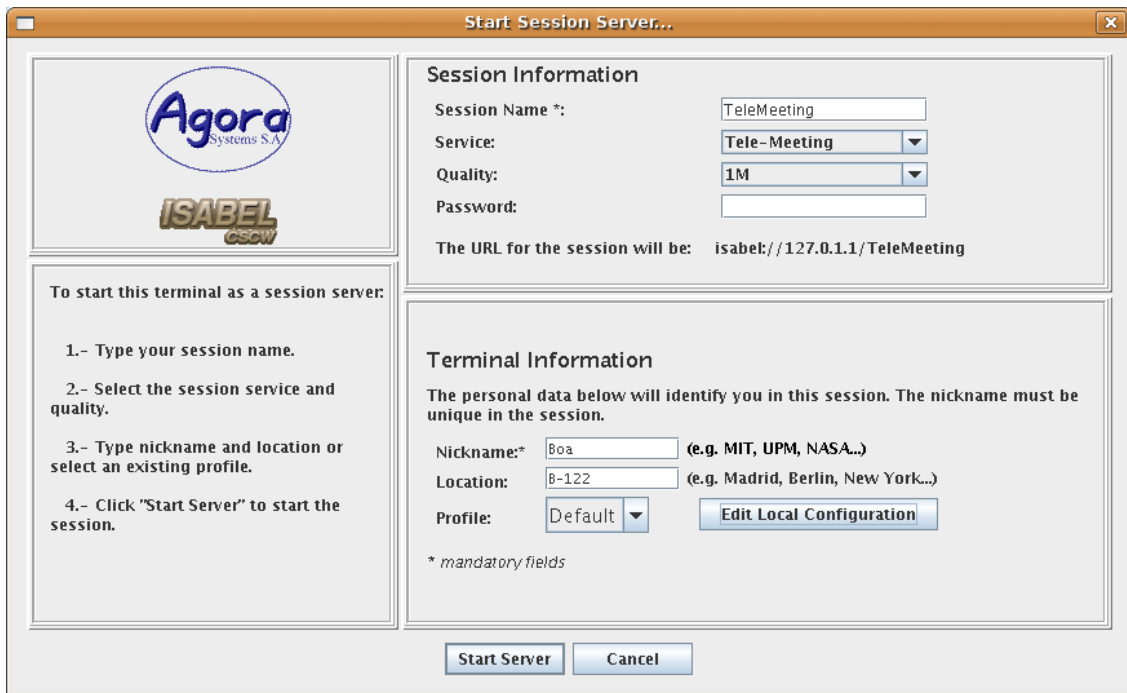


The following window will appear. There you can set the general parameters of a session:

- Name: Name of the session. The session URL will be indicated in the screen.
- Service: Type of service to be used in the session (telemeeting, teleconference...).
- Quality: The available bandwidth to be used in every link of the session.

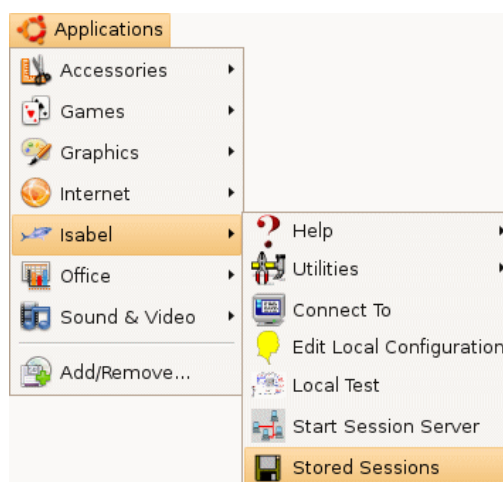
Isabel Reference Handbook	
November 2005	

In the “Name” field all the sessions created in your terminal during its lifetime are available (unless they are manually deleted). If you select one of these sessions, all parameters will automatically change to the last state configured for that session.

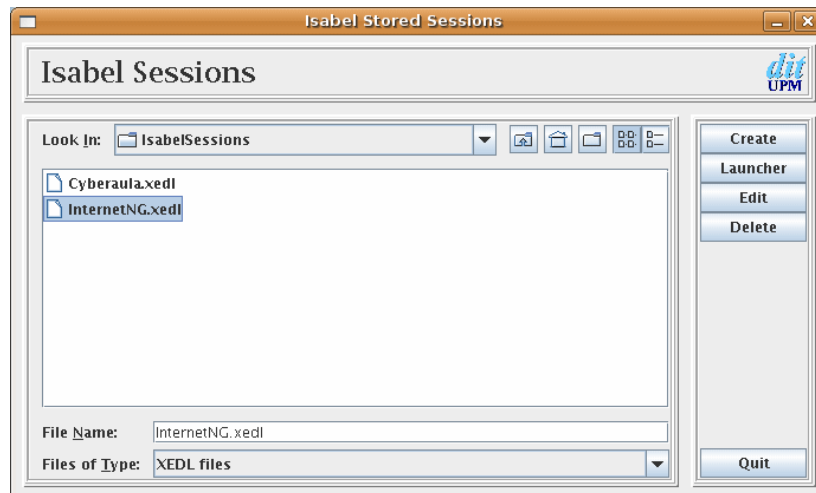


When you set these parameters, click on “Start Server” and a Session server will be started in your terminal.

## 4.7. Stored sessions



The Stored Session window allows to keep several Isabel sessions, create, delete and edit them, and also launch them with the Isabel Launcher.



Refer to the “Participant’s Guide” for more information on the Isabel Launcher, and to the “Organizer’s guide” for more information on the graphical editor.

## 5. Isabel components.

Components are every one of the multimedia modules that Isabel uses to perform distributed meetings. In this section you can find the description of each one of the Isabel components:

**FTP component.** The FTP component is in charge of sending slides from the local terminal to the selected ones in a session. It is the Isabel’s FTP client/server daemon.

**Audio component.** The audio component sends the local audio stream to the rest of terminals in a session and receives their audio flows to play them through the local audio hardware.

**PRST component.** This component manages the pointer, the background of the Isabel session, the slides and the titles for the videos.


**SldFTP component.** This component is the FTP GUI which becomes visible when clicking on the “Slides FTP” button in the Telemeeting and Teleclass toolbar.

**VNC component.** This component is the NeReDa VNC client/server and reflector.

**Notepad component.** This component is the Notepad application which opens when activating a Notepad interaction mode.

**Whiteboard component.** This component is the Whiteboard application which opens when activating a Whiteboard interaction mode.

**ShDisplay component.** This component is the SharedDisplay VNC client/server.

Isabel Reference Handbook	
November 2005	

**Video component.** The video component is in charge of receiving and displaying remote video streams and of sending the local video flow to the rest of terminals connected to a session.

**CamControl component.** This component is the application which opens when clicking on the “Camera control” button in the Isabel toolbar. It is used to remotely control robotized video cameras.

**Question component.** This component is in charge of managing the questions panel.

**Monitor component.** This component is the monitor

**ClassCtrl component.** The ClassCtrl component is in charge of managing the Teacher’s Control Panel in a Teleclass.

**Chat component.** The Chat component manages the Chat window in the Teleclass service.

**SpeechMeter component.** This component manages the Semaphore in the Teleconference service.

**Subtitles component.** This component manages the Subtitles component in the Teleconference service.

## 6. Isabel “terminology”


**Administration window.** The Administration Window spawns when clicking on the “Administration Window” button in the Teleclass and Telemeeting toolbar. It shows the state of all the components of all the connected sites. If a terminal has the necessary rights, it is possible to kill, start and restart any component of any terminal connected to a session.

**Child site.** A *child site* is an *Isabel terminal* which is connected to a *parent site*. A *child site* can in turn be the *parent site* of additional *Isabel terminals*.

**Component.** A *component* is every one of the multimedia modules that Isabel uses for performing distributed meetings.

**Control flow.** A *control flow* is the data stream that Isabel uses to internally coordinate *sessions*. This flow, as the *multimedia flows* do, always follows the *topology* tree.

**Flowserver.** *Flowservers* are *Isabel terminals* concerned about distributing control and *multimedia flows*. These terminals are used to distribute to other leafs the Isabel flows, acting as a union node in the tree *topology*. This *role* enhances the scalability of session topologies. As an extension of the term, *Flowserver* is also used as a synonym of *parent site* even if its *role* is not *Flowserver* but *Interactive* or *Mediaserver*.

Isabel Reference Handbook	
November 2005	

**Gateway.** A Gateway is a special kind of Isabel terminal that transforms the Isabel control and multimedia flows to another videoconference standard. Gateways to H323, SIP, Skype,... are very usual. They are not an intrinsic part of Isabel, but deployed on demand.

**Interactive Terminal.** An interactive terminal is a PC running Isabel, which enables the access to a remote collaboration *session*. This is the *role* that would be running in the *terminal* of a participant in a *session*.

**Interaction mode.** Combinations of components are preconfigured to build interaction modes. The available interaction modes for a terminal may vary depending on the service which is being used and the role of that terminal in the session.

**Isabel menu.** The Isabel menu is the menu available from the Applications → Isabel button on the upper-left corner of the screen. It is also shown when “isabel” is run from the command line.

**Isabel Terminal (Terminal).** An *Isabel terminal* is a computer (PC) where the Isabel CSCW application has been deployed plus all the additional hardware necessary to run Isabel (audio and video hardware, network hardware...).

**Multimedia flow.** The *multimedia flows* are the data streams which carry the video data flow, the audio data flow, the VNC data flow and other multimedia data flows.


**Parent site.** The *parent site* is the *Isabel terminal* which a *child site* is connected to.

**Role.** The *role* is the function that a terminal fulfils. There are several roles a terminal can fulfil in the session *topology*: *Interactive* or *Flowserver*.

**Service.** A *service* is a set of specific *interaction modes* and a set of interaction permissions for the *terminals* in the *session* (this is, the capability of changing the active mode or changing some components configuration).

**Session.** The *session* is the context where participants meet each other, and differentiates one meeting from another. Isabel sessions are composed by a set of *Isabel terminals* connected following a certain *topology*.

**Session Server.** The *Session Server* is the coordinator of a session, which defines the overall characteristics of the platform built around it, such as links bandwidth, type of service used in the session, etc... The *Session Server* must be up for the rest of participants to connect. Once the *Session Server* is started, interactive sites can connect and disconnect from the event as needed. This Server can be a dedicated terminal or an Interactive Terminal. As session's *topology* is tree based, the *Session Server* is the root of the tree. Only and only one Server is required in an Isabel *session*, which will be set up by the event organizer.

Isabel Reference Handbook	
November 2005	

**Session URL.** Is the URI that determines the point of connection to an Isabel session. It is only the point where the new terminal request joining a session and has not to be the point where the terminal will finally join.

**Topology.** The *topology* is the way the terminals are connected together plus their role in the session. The session *topology* is tree based: all the terminal, except for the *Session Server*, have one *parent site* and none, one or more *child sites*. In Isabel is also possible to use multicast topologies which break the tree based form.

**XEDL.** Xml sEsson Definition Language. XEDL is the language specification used to define Isabel session topologies, session parameters,... it defines a whole Isabel session, and is used internally by Isabel to save them in the Stored Sessions window.