


Introduction to Isabel	
(Isabel 4.10)	
October 2006	

1. Introduction to Isabel

Isabel (<http://www.agora-2000.com> → Products → Isabel) is a multipoint group collaboration tool which provides a more effective management of multipoint session than existing videoconferencing systems, by combining TV production techniques which provide a uniform visual message to all participants, with an innovative floor control mechanism which enables an ordered intervention of the participants. Participants of an Isabel session will be able to share applications, perform presentations, order questions, perform distributed panel discussion, use a blackboard, etc. The following figure illustrates typical configurations.




Isabel platforms are significantly cheaper than equivalent videoconferencing systems because any Isabel terminal incorporates a multipoint unit allowing multipoint sessions by connecting to the nearest participant, eliminating the need for the costly VC multipoint control units (MCUs). Isabel terminals can run over IP unicast or multicast, as well as use IPv4 and IPv6. This leads to the use of a large spectrum of different network technologies (Ethernet, ATM, ISDN, xDSL,...).

Isabel is a well proven solution which has been used to perform, during the last years, a large number of distributed events over the Internet, such as IPv6 Global Summits, Music-Grid, the Internet NG Conference, Vodafone Distributed Master, etc.

Isabel has been designed for room interconnection (classrooms, auditoriums or meeting rooms), but can be used also at the desktop. The use of Isabel allows minimizing travel of persons, as well as timely organization of meetings when needed, reducing activity lead times and increasing the overall productivity of an organization.

Isabel adapts to user requirements by using defining specific services for different types of collaborations. For example:

- Tele-conference service: for the organisation of distributed congresses or conferences with a strict program where speakers, organisers and attendees are located in different auditoriums interconnected with Isabel.

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- Tele-meeting service: for organising distributed meetings where participants located in meeting rooms interconnected with Isabel can interact in a free and unconstrained way.
- Tele-class service: for creating distributed classrooms where collaborative educational or training activities among different Faculties or Universities can be performed under the control of the professor or tutor.

1.1. Isabel 4.10 new features

- One CD for Live and installed version (Ubuntu based).
- Integrates GNOME (or KDE). No more TWM Window manager.
- GNOME access to disks in display sharing. With Open Office installed and PNP USB Pen Drive Access.
- Improved video support.
- Single toolbox button.
- Easy session server set up.
- Password protected sessions.
- Local audio video test mode.
- Automatic patch and version update.
- Server licence limits are cascaded in a session. Total limit is summation of limits.

2. Product and Licenses


Isabel 4.10 is a software solution which transforms a PC into an advanced videoconferencing station for the Internet. A PC with Isabel installed can be a server or a client. Only servers need a license. To facilitate installation a Live Ubuntu Isabel CD is distributed which runs live and can be used also to install Linux and Isabel together.

Isabel can be downloaded from <http://www.agora-2000.com/?display=products/isabel/>. The following downloads are available.

1. *An Live Ubuntu Isabel CD ISO image to burn a CD to install Linux and Isabel together:* The Live Ubuntu Isabel CD installs Ubuntu Dapper Drake together with all the Linux packages needed and Isabel in one shot.
2. *The Isabel package:* A .rpm or .deb to be installed on SuSE, Fedora, RedHat, Debian and other Linux distributions.

After installation the PC is an Isabel terminal able to connect to a session. The Isabel PC needs a *license only to organise sessions* when acting as a session server. Each license enables N terminals to participate in a session.

Licences can be cascaded, so an enabled M licensed terminal joining an enabled N licensed server will result in a N+M enabled session.

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A session server accepts clients above the limit established by the license, but they will enter the session in demo mode, a panel will appear periodically on the screen reminding that it is in demo mode.

An Isabel PC without license enables 0 terminals and can therefore be a demo server to organise a demo session. As Isabel is P2P like and any PC can be the server or the client of a session, a peer to peer licensing scheme can be used where N licences with limit 1 can be assigned to a group of N Isabel PCs, such that any of them can host a session for the rest.

Licenses can be requested via Web or email to Agora Systems. Licenses can only be installed on PCs with Isabel installed on the hard disk. Isabel licenses are provided by Agora Systems S.A. (<http://www.agora-2000.com>) or resellers.

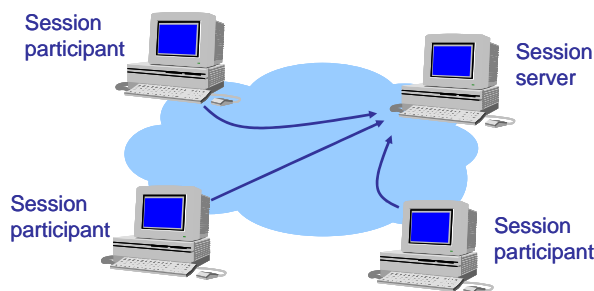
3. Requirements

Isabel is a completely software-based solution which transforms a PC into an advanced videoconferencing system for the broadband Internet. The rough requirements for such installation are (for a detailed explanation of the requirements, refer to the “Isabel participant’s guide”):

- A modern mid-end PC, with multimedia equipment (microphone, speakers, camera,...) supported by SuSE Linux. Check also the “Audiovisuals guide” for more complex deployments.
- An IP network ranging from 128k to 10M (depending on the needed quality), and either a public IP address or a properly configured NAT. The following ports are needed: 53009-53023 bidirectional TCP and 53020-53032 bidirectional UDP.

4. Setting up an Isabel Platform and Session

A PC with Isabel installed can play any of the roles needed to create complex collaboration platforms. A very simple way of setting up a multipoint platform is starting a server and connecting clients to the server as shown in the next figure.



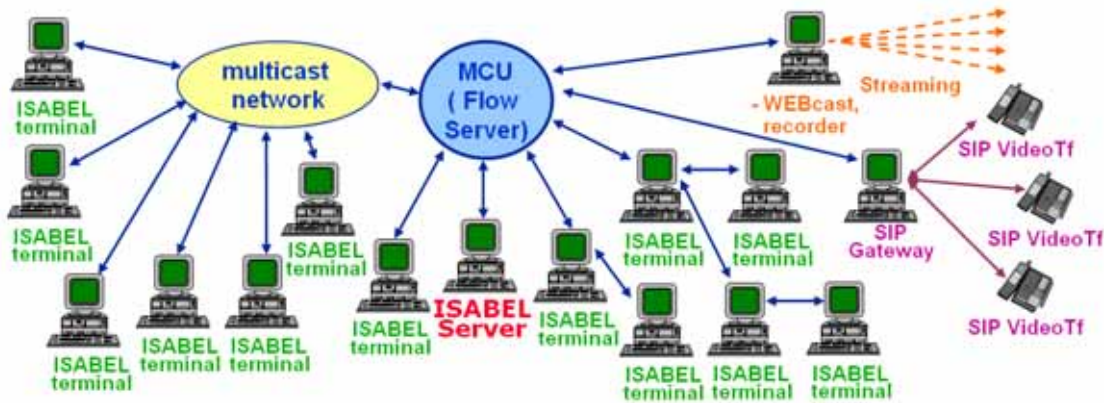
The simple star topology of the multipoint of the previous figure does not make an optimal use of the bandwidth. More complex platform topologies can be set up, where a terminal can call another terminal connected to the session or where a dedicated MCU

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(flow server) is used as an always on proxy to a session. The following platform elements can be created with an Isabel PC:

1. *Session server*: A session server creates and manages an Isabel session.
2. *Interactive terminal*: An interactive terminal allows participation in an Isabel session.
3. *MCU*: A standalone multipoint unit acts as an MCU for IP unicast, a gateway between unicast and multicast or as a session access proxy.
4. *Gateways*: Gateways to other platforms can be deployed on demand.

The following Figure illustrates a typical Isabel platform with some of those elements.




To configure and manage complex platforms the “Isabel organizer’s guide” must be used.

5. Additional information and documentation overview

This document is just a quick non-technical introduction to an Isabel session. Further information can be found in the rest of the Isabel documentation at <http://www.agora-2000.com/> → Products → Isabel

The following documentation is available:

- **Introduction to Isabel 4.10 and documentation overview**: this document.
- **Isabel quick guide**: instructions on how to make a quick videoconference using preinstalled Isabel terminals.
- **Isabel participant’s guide**: guide for people who want to join an Isabel session organized by a third party. It provides information on how to install and test a local Isabel terminal, the network requirements and how to participate in the session. It also includes information for people who will operate an Isabel terminal in the say-by-day basis.

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- **Isabel organizer's guide:** guide for people who want to organize their own Isabel sessions. It includes information about session management, Isabel session architecture, definition of sessions and advanced roles.
- **Isabel services handbook:** reference book about the Telemeeting, Teleclass and Teleconference Isabel services.
- **Isabel audiovisuals:** guide for the connection of audio and video equipment to Isabel terminal, from small personal terminals to very large auditoriums.
- **Isabel reference handbook:** reference book for the Isabel application.
- **Isabel LUI guide:** Live Ubuntu Isabel CD live usage and installation instructions.
- **Known problems:** compilation of problems (and fixes) that are related with Isabel, but are not actually part of Isabel (such as Operating Sysmtem, hardware,...)