



Monash EVO User Guide Version 1.12

November 11, 2008



of experience of developing and operating the large distributed VRVS collaboration system now in production. The primary objective of EVO is to provide an improved system and a service to the LHC and other major High Energy Physics programs that fully meets the requirements for usability, quality, scalability, adaptability to a wide range of working environments, reliability and cost. The EVO infrastructure automatically adapts to the prevailing network configuration and status, so as to ensure that the collaboration service runs without disruption. Because EVO is able to perform end-to-end monitoring, including the end-user's computer as well as the network infrastructure, we are able to inform the user of any potential or arising problems (e.g. excessive CPU load or packet loss) and, where possible, to fix the problems automatically and transparently on behalf of the user (e.g. by switching to another server node in the network, by reducing the number of video streams received, by adjusting audio volume, etc.). The integration of the Monash USA agent-based system

ENTER



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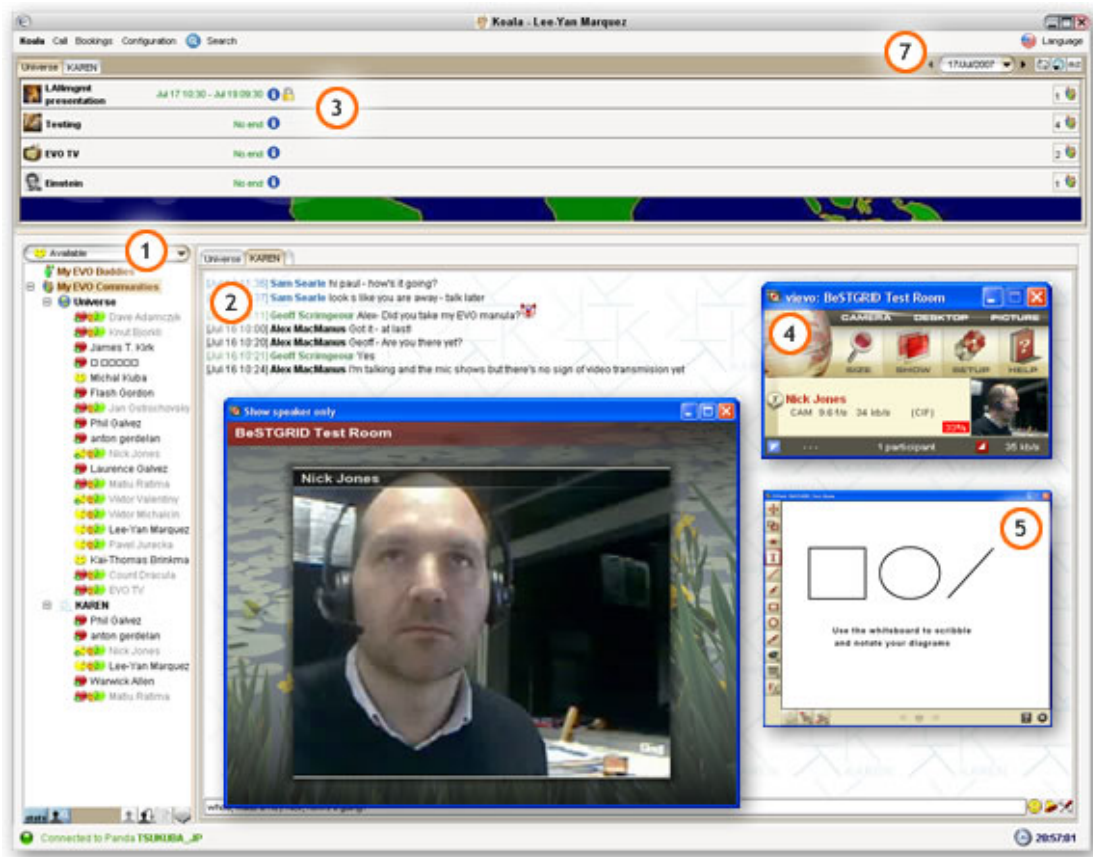
1 Important terminology

“Koala” – The EVO Client, the software that runs in your PC.

“Panda” – The server used by EVO, the closest of which is based at Monash.

2 Screen layout

EVO operates through a series of windows which allow access to different functions and tools. The image below outlines a number of these areas and also includes a brief description of their function.

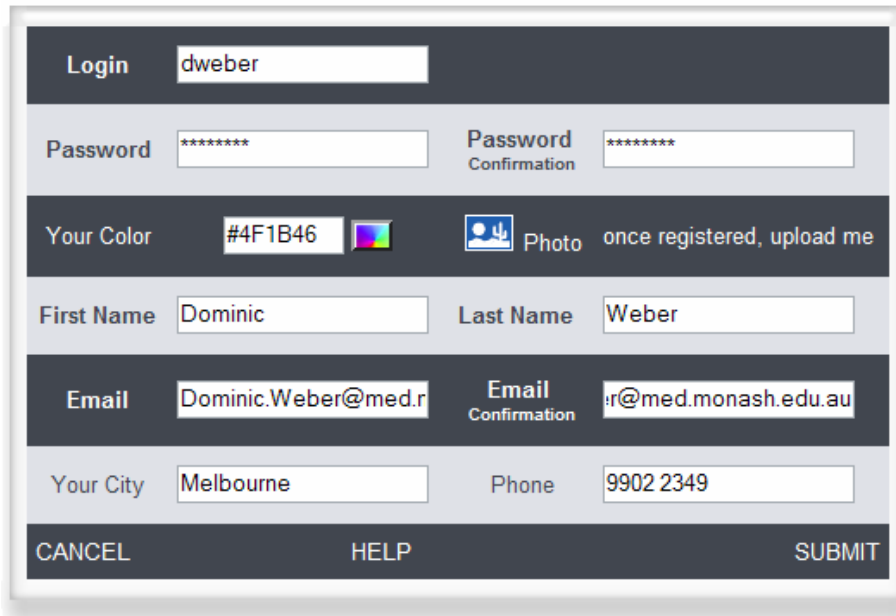


- 1 Instant messaging functions and presence information (i.e. available, busy, ...)
- 2 Private or group chat during a meeting
- 3 Meetings-by-invitation, ad-hoc meetings, booked meetings, and permanent meetings
- 4 Playback and recording functions (of the entire session [video, audio, whiteboard, Instant Message, Chat,...])
- 5 Shared files, high resolution sharing of any screen area, and whiteboard functions
- 6 Support for several standard videoconferencing protocols: H.323 (Polycom, Tandberg, ...), Session Initiation Protocol (SIP) for VoIP, and the well-known Real-Time Protocol (RTP) used by most of the collaborative applications.
- 7 Automatic TimeZone adjustment and Multi-Language support (English, French, Slovak, German, Italian, Spanish, Portuguese, Finnish, and Chinese)
- 8 Firewall-friendly and support for Network Address Translation (NAT)
- 9 End-to-End encryption of all the media (video/audio/chat/IM/ ...)
- 10 A new video application based on OpenGL where all the live video windows and other objects are embedded in, and may move in a three dimensional space. (This application, which uses the graphics processor unit (GPU) to offload the main CPU and leave it free for other work, is currently available on Windows only, support for other operating systems will follow soon.)

3 Important functions

3.1 Registering and creating an EVO account

- In order to utilise EVO, the first step is to access <http://evo.caltech.edu/> and click on the “**Register**” button. Here, the user must enter their preferred username and password, as well as some simple personal information. Once the form has been completed, the user must click on “**Submit**”, and an activation email will be sent to the email account that has been entered in the form. The email should then be accessed, and its instructions followed to activate the user’s EVO account.



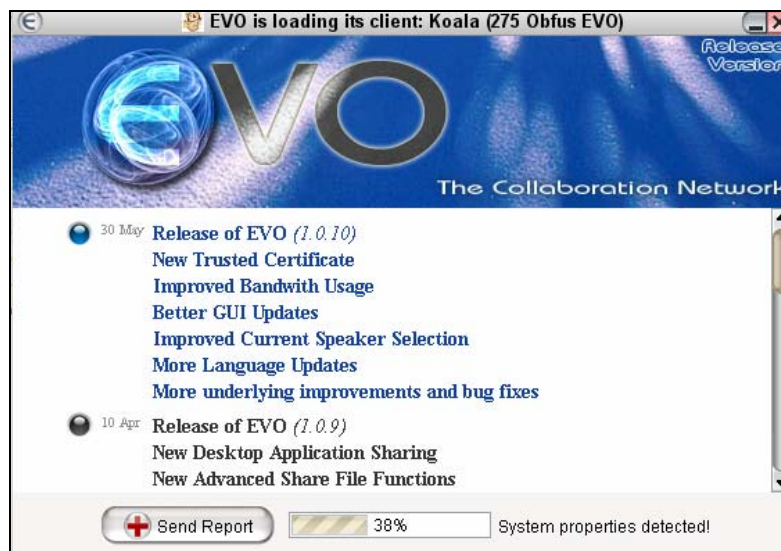
The screenshot shows a registration form with the following fields and values:

Login	dweber		
Password	*****	Password Confirmation	*****
Your Color	#4F1B46	Photo	once registered, upload me
First Name	Dominic	Last Name	Weber
Email	Dominic.Weber@med.r	Email Confirmation	r@med.monash.edu.au
Your City	Melbourne	Phone	9902 2349

Buttons: CANCEL, HELP, SUBMIT

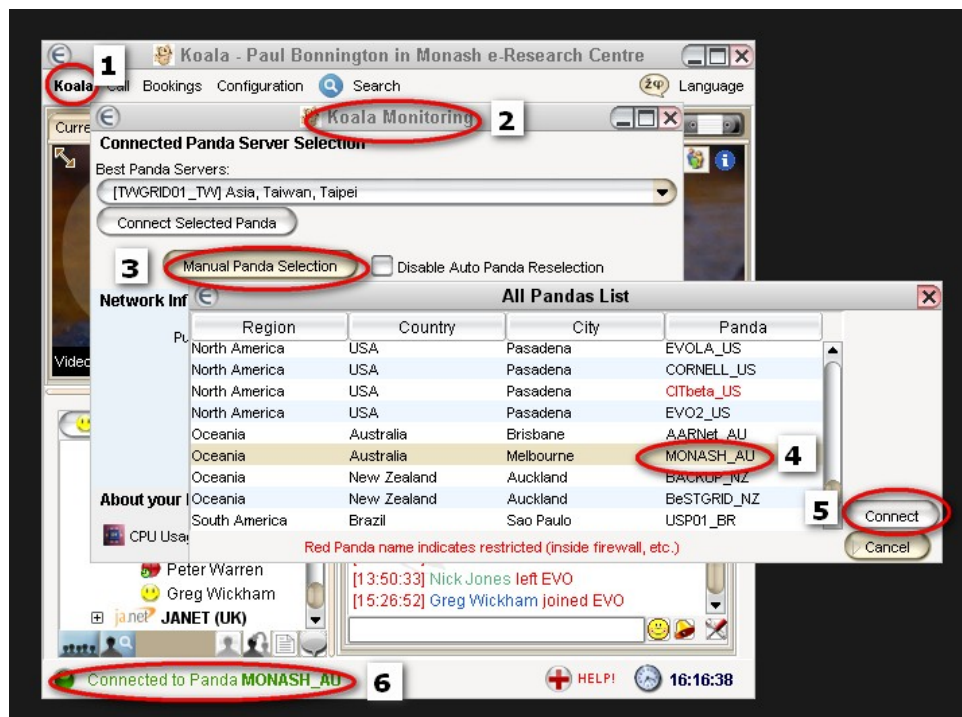
3.2 Installing the EVO client

- Once the account has been activated, users must access <http://evo.caltech.edu/> once again and click on the “**Start**” button. This will download a file called “koala.jnlp” (the EVO client) and should be saved to the desktop and then double-clicked in order to run the program.
- The program will take a short time to load, as it will automatically download content to the local PC. It may also be necessary to “**Unblock**” the program if a firewall is installed, such as that which comes with Windows XP or Vista. For an example of this, please see the example presented in Section 3.3 on page 5.

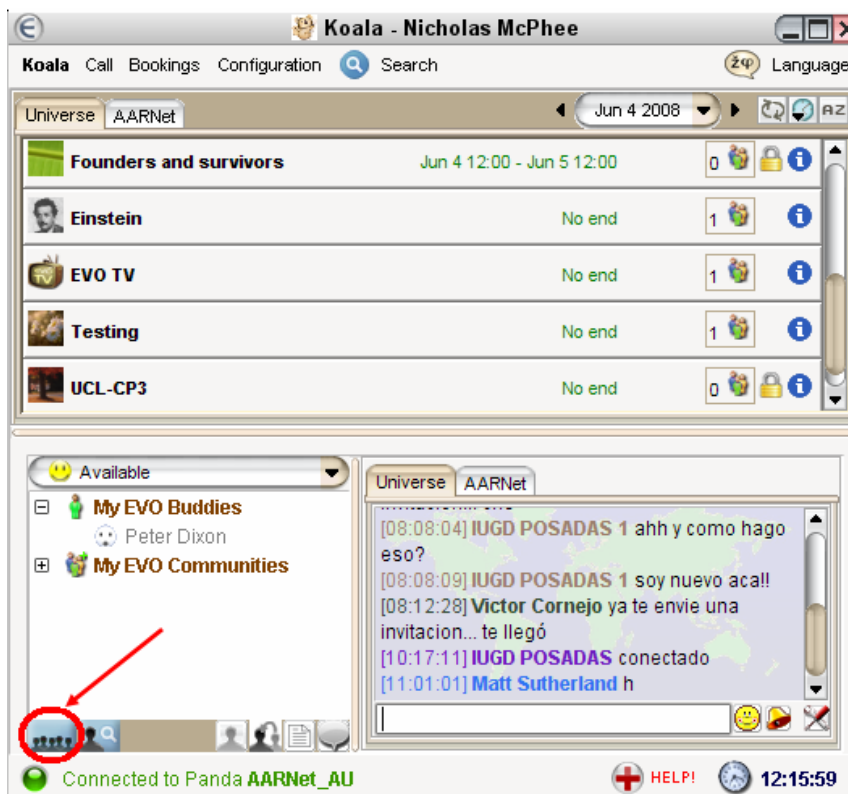


3.3 Using and Configuring EVO

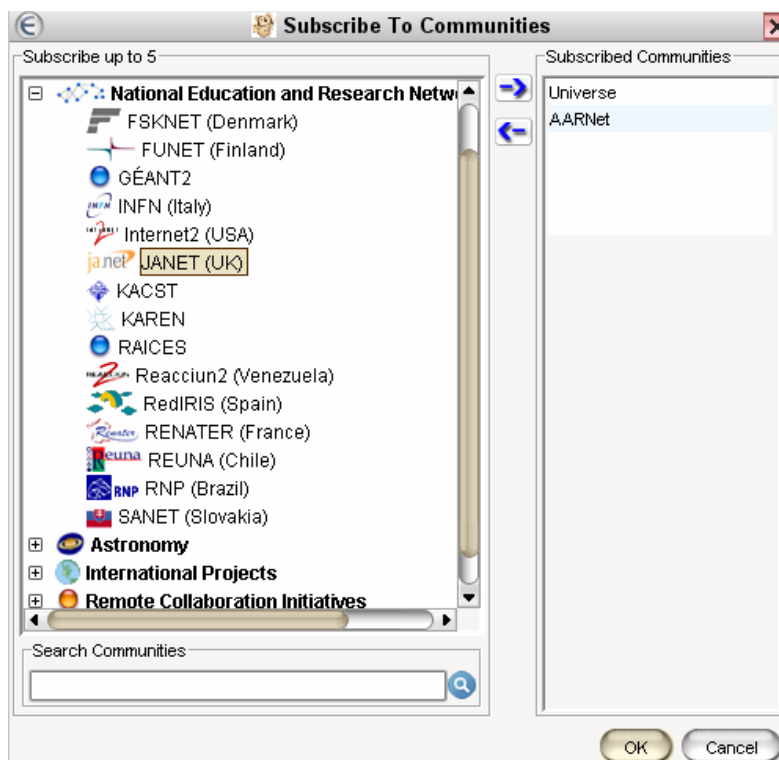
- Once EVO’s client, “Koala”, has finished loading, it will be necessary to log in using the username and password combination that was entered during the EVO registration process.
- After logging in for the first time, new users should ensure that the Australian Monash “Panda” server (part of EVO’s infrastructure) is selected. The Monash server should be selected by default, but it may be necessary to select it manually. In order to do this, users should click on the “Koala” item in the top menu (1), and then click on “Koala Monitoring” (2). This will open up a new EVO window, and then users should click on “Manual Panda Selection” (3). This will open a final window, and users must scroll down to find the “MONASH_AU” server (4). It is then a simple matter of left-clicking on this server and then on “Connect” (5), and then checking to see if the server is being utilised (6). These steps are shown in the image below, and are labelled 1-6 respectively.



- The next step is for users to subscribe to the relevant EVO community or communities used by their collaborators. This is accomplished by clicking on the “Other EVO Communities” button.

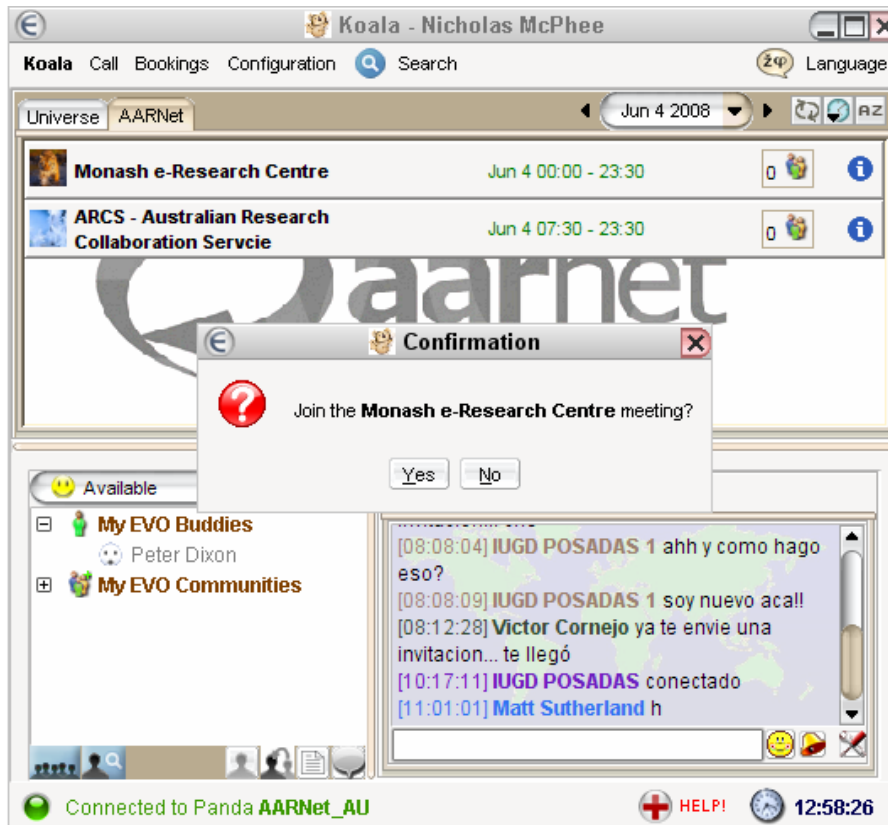


- Clicking on the aforementioned button will open up a new window that will list a number of categories. In order to expand a category, simply left-click on the cross to the left of the category name. The relevant community group should then be selected and confirmed by clicking on “OK”.

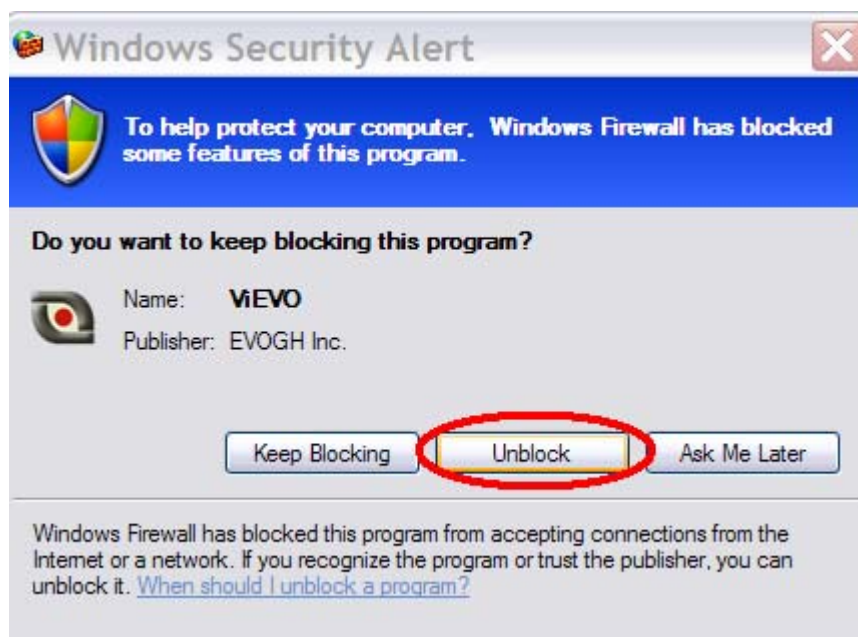


- Once the relevant community (or communities) has/have been selected, they can be accessed from the main EVO page by left-clicking on the relevant tab. Once the tab has been selected, the user will be presented with a list of (virtual) “rooms”, which may be open or closed depending upon the time of day. Some meeting rooms may only be open during business

hours for example, while other may be closed when they are holding private meetings. Left-clicking on a meeting room will present a pop-up box which will allow users to enter the relevant meeting room.



- Upon entering a meeting, it may be necessary to allow a firewall, such as the Windows XP or Windows Vista firewall, to allow EVO access. If this is the case, then a pop-up box will be displayed resembling the example below, and the “**Unblock**” button should be selected.



- Once a meeting room has been opened, the user will be presented with the main window, as well as additional windows which are dependant upon the presence of camera feeds from other users and from the user’s own PC. The main window should resemble the following:



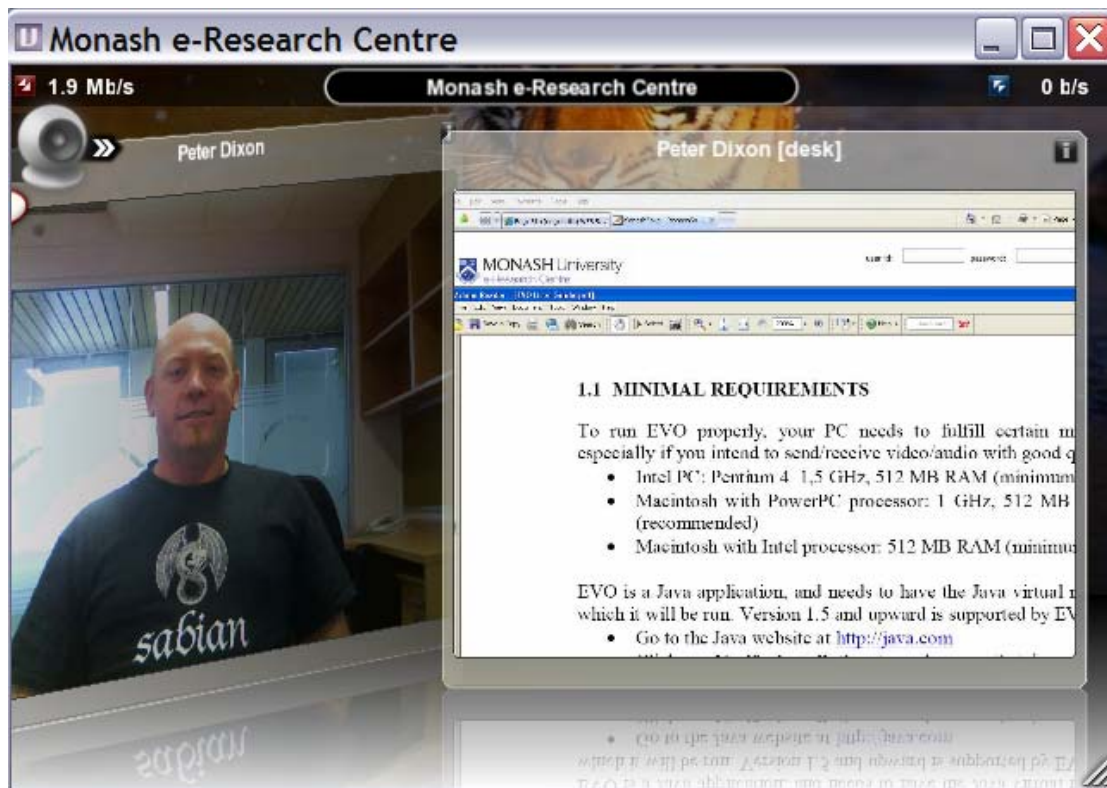
- In addition to this window, if there are any live video feeds they will be displayed in a separate window.



- The above window is also used to display the image from the “**Desktop Sharing**” function, which can be accessed by clicking on the appropriate item in the main window.



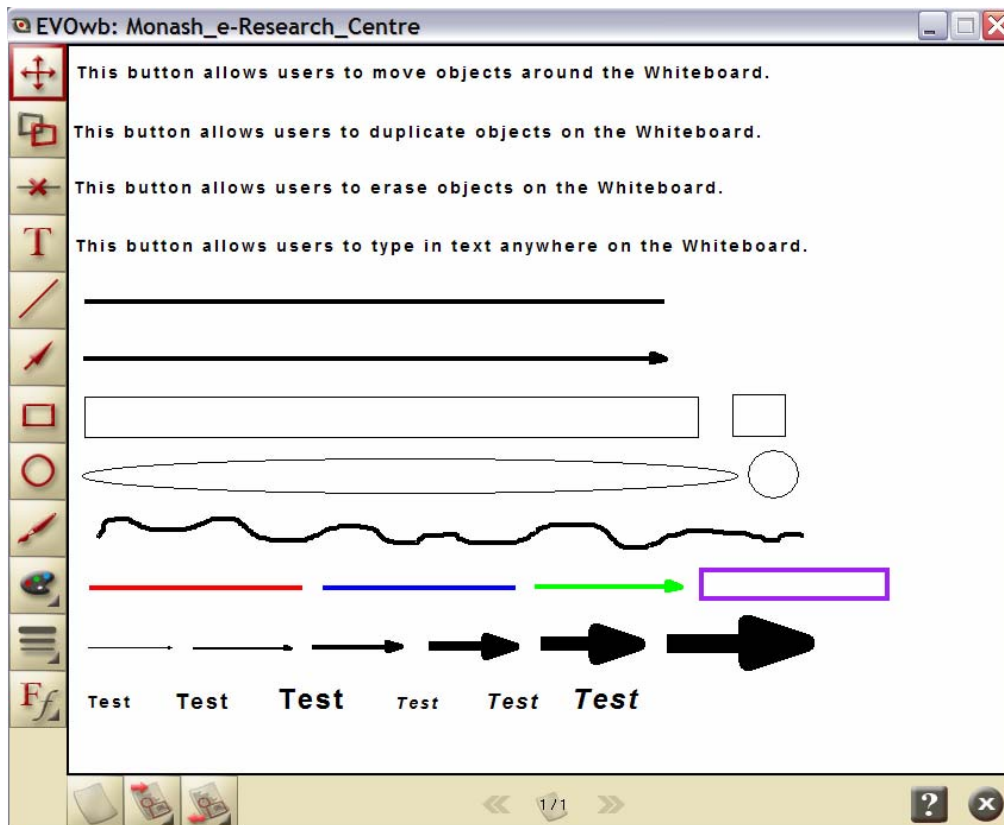
- Once desktop sharing is enabled, the camera feeds or feeds will be moved to an adjoining frame in the window, and a new window will be created that will display the desktop view selected by the user.



- Another useful option is the EVO Whiteboard, which can be opened by clicking on the appropriate icon in the main window.



- The Whiteboard provides a collaborative work space that can be used as a free-form drawing and discussion surface for collaboration. The main features and capabilities are demonstrated in the following image:



- The first button along the bottom of the Whiteboard allow users to create additional Whiteboards that can be scrolled through using the left and right arrows on the page, while the button to the right of it allow for images and documents to be inserted into the Whiteboard, and allow Whiteboard sessions to be saved respectively.
- The above covers the essential features available in EVO, however there are many additional functions that are available. These additional features are documented in the EVO Manual (http://evo.vrvs.org/evoGate/help.jsp?Evo_Manual), and also in the URL provided in Section 3.4.

3.4 Additional EVO Documentation

- In addition to this User Guide and EVO's documentation, <http://www.bestgrid.org/index.php/Category:EVO> contains a number of useful resources, as well as videos detailing the ways in which EVO can be used.

4 Troubleshooting

If you are experiencing difficulties with EVO when attempting to launch the program, please ensure that you have the latest version of the Sun Java Runtime Environment installed. The most recent version of the *Java SE Runtime Environment (JRE)* can be downloaded here: <http://java.sun.com/javase/downloads/index.jsp>.