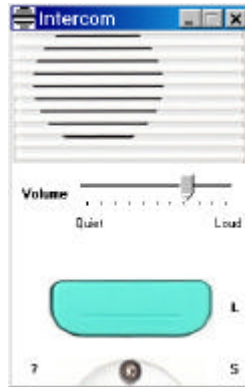


# INTERCOM



A VOIP R&D Prototype

6/15/06

Copyright 2006 T. H. E. Solution LLC

# Table of Content

<b>WHAT IT IS .....</b>	<b>1</b>
<b>REQUIREMENTS.....</b>	<b>1</b>
<b>INSTALLATION .....</b>	<b>1</b>
<b>USER INTERFACE .....</b>	<b>2</b>
<b>APPENDIX A, EDITING ADDRESS BOOK FILES.....</b>	<b>5</b>
<b>APPENDIX B, SOFTWARE LICENSE.....</b>	<b>6</b>

## **WHAT IT IS**

You are a small business. You have a number of associates and each (or most) have a PC. You have even linked them together with a LAN (wired or wireless) so that you can easily share things. But at times quickly sharing ideas requires either a lot of typing (instant messaging, Email etc.) or that someone leave their desk. How would you like to enable each individual to talk with anyone else on your network?

1. Without new equipment.
2. Without additional wiring.
3. Without exposing you to the many horrors of the Internet.
4. Without subscribing to any external service.
5. Without difficult to install or learn software.

Use cutting edge Voice technologies within the form of the simplest and most intuitive machine based conversation model that exists, an intercom.

## **REQUIREMENTS**

The Intercom software provides a simple person-to-person conversation tool that uses their PC and an existing network. It requires:

1. User PC s with
  - a. Windows 2000 or latter,
  - b. Windows .NET 1.1 (downloadable for free)
  - c. A sound card with speakers and a microphone (or even better a headset).
  - d. A local area network setting that includes UDP/IP and Client for Microsoft Networks.
2. A local area network (wired or wireless) that supports UDP/IP.

## **INSTALLATION**

Installation of the Intercom application is simple. Extract the content of the Zip file, intercom1\_0s.zip, to the directory of your choice. The application file is intercom.exe. In addition there is are two small utility applications:

1. One to check for the installation of .Net version 1.1, netcheck.exe,
2. One to create an address book and network configuration file, config.exe, for the Intercom application.

If you are not sure that the correct version of .Net has been installed on your computer just run this utility. If version 1.1 is not on your machine the utility will let you know and allow you to easily download it from Microsoft's Web site.

The configuration utility makes it easy to create the two network based files used by the Intercom application. First is the UDP port number. The default configuration is to use UDP ports 3000 and 3001. Normally this does not need to be modified. However, if this conflicts with something else on the network simply change the "RTP Port Number" field to any even port number.

The second is the address book used by the Intercom application to allow the user to select who to connect. The utility creates an address book based on the computers connected using Microsoft Windows Network. If you are not using Microsoft Networking you will need to create the address book manually. Appendix A provides details on the address book's content and format.

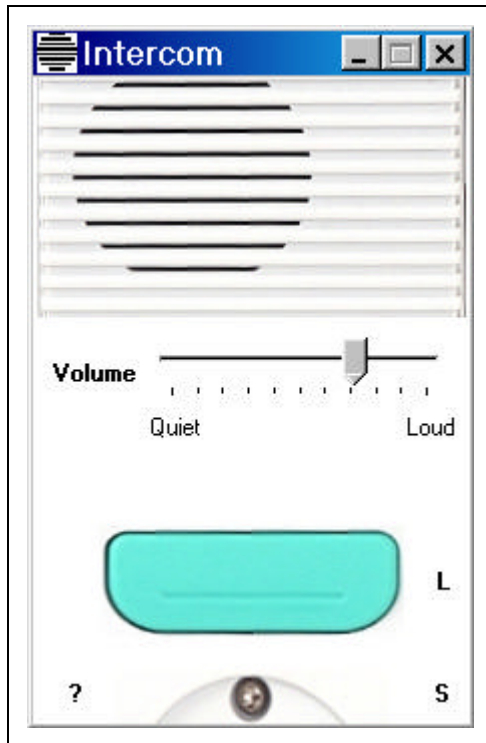
Once the address book and network configuration file are created you may want to create a reduced installation file for the other users by zipping up:

1. Intercom.exe
2. Netcheck.exe (if necessary)
3. audiortpinterface.dll
4. udp.cfg
5. intercom.add
6. help.htm
7. screen.jpg
8. select.jpg

**WARNING:** The Intercom application requires access to the network. If a firewall on the computer blocks such access (e.g. Microsoft's firewall installed with XP SP2) they need to be unblocked.

## **USER INTERFACE**

The Intercom application's main interface is shown in figure 1.



**Figure 1, Main user interface**

The use of the controls is summarized below:

1. The large green button is the “press to talk” button. During a conversation holding the left mouse button down on this button allows you to talk. When this button is active the light at the bottom of the interface will turn green.
2. The volume control allows the user to set the playback volume.
3. The selection icon, “S”, allows a user to select who you want to talk with. The icon is red if a selection has been made and black if not.
4. The lock icon, “L, allows the user to change how the press to talk button operates. When in normal mode, the L is black, you hold the left mouse button to talk and let up on the mouse button to stop. In locked mode, The L is red, you click the left mouse button to talk and click it again to stop talking.
5. The help icon, “?”, provides basic user help.
6. The area between the volume control and the press to talk button is used to display useful status information during operation. The includes the name of the person currently connected or “busy” when you attempt to connect with someone who is already in a conversation with someone else.

To start a conversation with someone:

1. Click on “S”.
2. On the selection dialog box (see Figure 2):
  - a. Select the person you want to connect with.
  - b. Press the select button (which returns to the main interface).

3. The “S” should be red so just press the press to talk button to start the conversation.



**Figure 2, Selection dialog**

When someone starts a conversation with you, you should hear them and see their name displayed in the area between the volume control and the press to talk button.

## APPENDIX A, EDITING ADDRESS BOOK FILES

The address book file used by the Intercom application is named `intercom.add`. You will find it in the same directory as the Intercom application. It is created by the address book utility. For a number of reasons you may want to edit this file after its initial creation. The file itself is a simple text file that can be opened and changed in notepad (or any other simple text editor). Each line identifies a computer on the network. A typical line as created by the configuration utility looks like:

```
The1,The1,3000,3 5 0
```

The first entry is the “name” that will show up in the selection dialog box. The configuration utility uses the names of computers found connected to the Microsoft Windows Network. You might want to change this to a name that is more user friendly. For instance the above example I could use notepad to change the line to:

```
Terry H. Ess,The1,3000,3 5 0
```

The second entry is the “IP address” for the computer. In a Microsoft Windows Network the computer name is dynamically associated with its IP address. The third entry is the UDP port number used to make a peer-to-peer connection. The final entry is a “list” of audio formats supported by the computer. Normally you should not change any of these.

## **APPENDIX B, SOFTWARE LICENSE**

All material in the zip file is the property of T. H. E. Solution LLC. By using the content of this file you agree to the terms of this license. You have the right to use this software with the following restrictions:

### **RESTRICTIONS**

You may use the binary software on any PC connected to your local area network.

### **COPYRIGHT**

All intellectual property rights to this material are owned by T. H. E. Solution LLC and are protected by United States copyright laws and international treaty provisions. T. H. E. Solution LLC retains all rights not expressly granted.

### **LIMITATION OF LIABILITY**

In no event will T. H. E. Solution LLC, be liable for any damages direct or indirect arising out of the use of or inability to use this material.