

EcomScs and GateWayScs

AX25 Packet Radio E-Mail

John Blowsky, KB2SCS kb2scs@arrl.net

Abstract:

EcomScs and GateWayScs are two stand alone programs that I have created.

EcomScs is a Packet Radio E-Mail Client. Everything that you can do with your internet E-Mail client you can do with EcomScs.

GateWayScs is a Packet Radio Internet E-Mail gateway. GateWayScs makes it possible for EcomScs to send and receive Internet E-Mails.

GateWayScs and EcomScs combined replaces my Both Way Radio Internet Email (BWRIE)

Key Words:

EcomScs, GateWayScs, Amateur Packet Radio, Emergency

How Does EcomScs Work:

Please refer to the figures 1 through 3 which are at the end of this paper.

Hardware:

An EcomScs station consists of a Transceiver, TNC and a PC. In other words a plain vanilla Ax25 packet station. The TNC operates in Terminal mode.

The sending and receiving of MIME compliant E-Mails is done all automatically by the user clicking on the send and receive tool bar button.

Presently EcomScs can use FBB BBS, Winlink nodes and GateWayScs to send and receive its E-Mails.

To Send an E-Mail the user would click on the Create New E-Mail button on the tool bar. A compose E-Mail window would open. (Figure 2)

The compose E-Mail window has all the fields that your internet E-Mail client has. Including a way to enter E-Mail addresses from EcomScs address book.

The window does have some extra fields such as the Personal, Bulletin, Winlink, and GateWayScs radio buttons at the bottom. If the user wants the E-Mail to begin its journey

via a FBB BBS then the user would click on the Personal or the Bulletin radio button depending on whether this E-Mail is a Personal message or a general Bulletin.

If the E-Mail is to start its journey via a Winlink node then the Winlink radio button would be clicked on Same with the GateWayScs radio button.

If the user would like to send an attachment with this E-Mail then they would click on the Attachment tab and then add their attachment. Attached files can be any file on your hard drive. The file will be encoded into Base64 just like your internet E-Mail client does.

Once a file is encoded in Base64 it is now a ASCII text file and therefore can be easily sent via Packet Radio. EcomScs of course can also decode Base64 files and therefore it is possible for EcomScs to receive attachments.

When the user is finished composing their E-Mail they would then click on the Send to Outbox button. This button as the caption implies does not send the E-Mail but instead saves the E-Mail to the EcomScs Outbox directory on the users hard drive.

The user can then compose more E-Mails. Each E-Mail can start its journey in any of the possibilities (FBB BBS, Winlink, GateWayScs)

So for example the user can have in their Outbox 30 E-Mails. Ten for FBB BBS, Ten for Winlink and Ten for GateWayScs. When the user clicks on the Send and Receive tool bar button the user is then presented with a choice. (Figure 3)

If the user clicks on the BBS button then only the ten BBS E-Mails would be sent.

If the user clicks on the Winlink button then only the ten Winlink E-Mails would be sent. If the user clicks on the GateWayScs button then only the ten GateWayScs E-Mails would be sent.

Lets us say the user clicks on the BBS button then EcomScs will connect to an FBB BBS, The first thing EcomScs will do is check to see if the user has any E-Mails waiting for them on FBB BBS. If any E-Mails are found then EcomScs will cause the FBB BBS to display the E-Mails. EcomScs does this by issuing the RM FBB BBS command. If the user has one or hundreds of E-Mails all these E-Mails will be displayed and therefore be down loaded to EcomScs Inbox.

After all the E-Mails are down loaded then EcomScs will send the ten FBB BBS E-Mails to the FBB BBS. EcomScs does this by issuing the FBB BBS SP command for each E-Mail. When these ten E-Mails are sent to the FBB BBS then EcomScs will disconnect from the FBB BBS by issuing the FBB BBS B command.

Basically the same procedure happens when EcomScs connects to Winlink nodes and GateWayScs stations.

GateWayScs

Hardware:

Please refer to the figures 4 and 5 which are at the end of this paper.

A GateWayScs station consists of a Transceiver, TNC, PC and an Internet connection. Dial up or full time Internet connection both will work.

Main Window:

The upper text box is where the POP3 and SMTP commands are displayed. This text box is so you the user can see how your Internet connection is working.

The bottom text box is where all the text that is sent and received by your TNC is displayed. This text box is so you the user can see who is connecting to your system.

(Figure4).

Setup: (Figure5)

On the left side of the setup screen is where you enter all the parameters to setup your TNC. On the right side is where you setup your SMTP and POP3 parameters. These are the same parameters you use in your Internet E-Mail client.

How Does GateWayScs Work:

30 min after you start up GateWayScs, GateWayScs does a POP3 session followed by a SMTP session. The SMTP happens only if there is E-Mails waiting in the GateWayScs Outgoing directory. These two Internet E-Mail sessions happen every 30 min.

When a EcomScs station connects, GateWayScs checks to see if that station has any E-Mails waiting if so then GateWayScs sends those E-Mails to the connected EcomScs station. After the EcomScs station has received its E-Mails if it has any to send it would send them to the GateWayScs station at this point in time.

The sending and receiving of E-Mails all happens automatically through the hand shaking that EcomScs and GateWayScs do with each other. The only thing that a user has to do is to click on the Send and Receive icon located on the EcomScs tool bar.

Is GateWayScs Legal?

The sending of Internet Emails via Amateur Packet Radio is no contest.

The Receiving of Internet Emails is a little "sticky".

GateWayScs would send an Email to EcomScs. It may have originated from a non HAM.

This in itself sounds illegal. But it is not since the way I have programed EcomScs and GateWayScs.

GateWayScs is set up to act just like a Packet BBS does. All Packet traffic is initiated by the Ham operator at the EcomScs station. When the Ham operator at the EcomScs station wants to read his Email that is waiting for him at the GateWayScs station all he has to do is connect to the GateWayScs station.

Connecting to GateWayScs causes GateWayScs to check to see if the connected station has any new E-Mails.

If GateWayScs finds any new E-Mails for the connected station GateWayScs sends those E-Mails to the connected station. The Ham operator is causing (initiating) all the packet RF traffic and a non Ham is never causing a Radio to key then I feel that this system is legal under FCC rules.

How do I get EcomScs and GateWayScs:

Please Go to the following URL

<http://www.qsl.net/kb2scs>

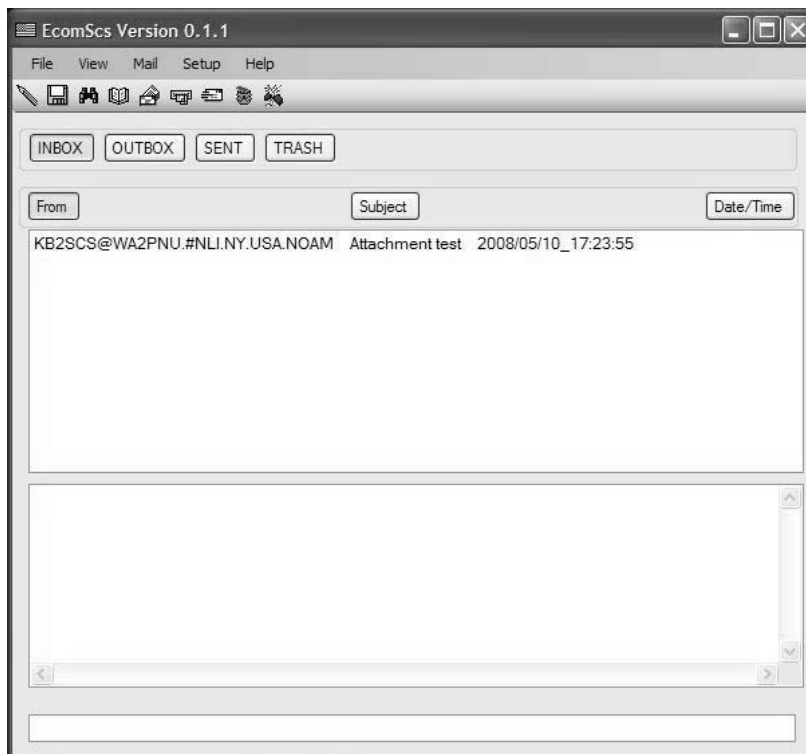


Figure 1:

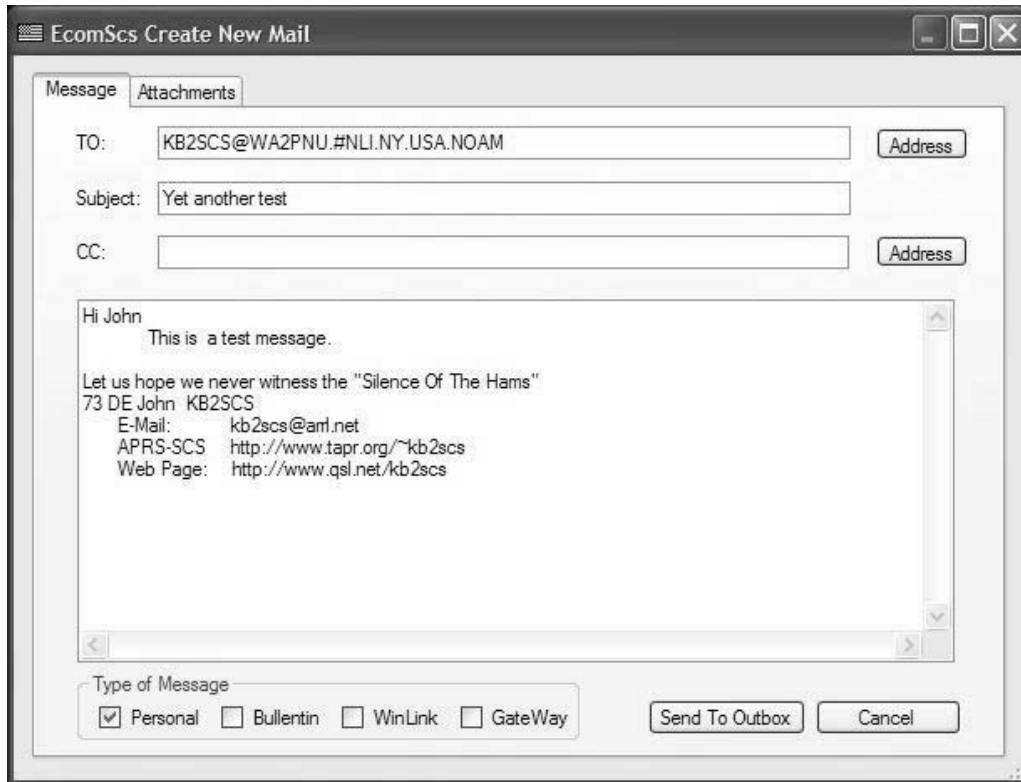


Figure 2

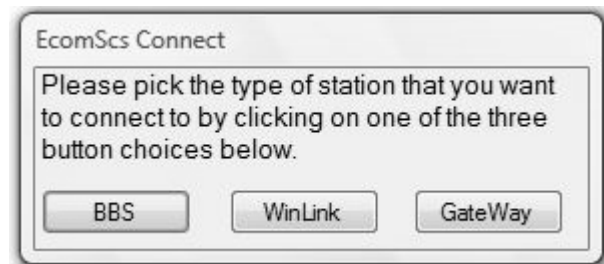


Figure 3