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Abstract

Over the past several years a variety of message routing systems have been used. The tendency has been to not step back from the problems and address fundamental issues. This paper will attempt to achieve that elusive goal and outline a routing system which will allow the Amateur community to operate with efficiency and ease.

Issue

The Amateur packet community has used the RLI-style addressing format of 'STATION **@** SYSTEM" for several years, This was **NOT** the way it began...

The first format provided a simple "TO" field ("STATION"]. This format required every message system to maintain a routing table entry for **ALL USERS** of the network. This rapidly became unworkable, and evolved to a system where the message systems would only be required to maintain entries for **ALL OTHER SYSTEMS** in the network. This approach gave us our current "STATION **@** SYSTEM" format. This format was challenged at the time of introduction, but there was only one system implementation (and by extension, one implementor) to make the changes requested. What was clearly needed was a method for implementing **IMPLICIT** routing system.

Solution

The **KA2BQE** and **NN2Z** of the Radio Amateur Telecommunications Society have taken the CBBS code written by **WORLI, VE3GYQ** and others and produced PRMBS. They have made a variety of changes which inter-operate with the the **WA7MBL** message system. One of the more important changes has been the addition of a new message header **structure.** One component of this new header is a change made to the "TO" and "FROM" fields to provide **IMPLICIT ROUTING** of messages. They have implemented this as a suffix to the "SYSTEM". It takes the format:

STATION **@** SYSTEM/AX.121 ADDRESS

This has been outlined in the RATS AX.121 document.

Because it is unclear whether all other systems will make comparable changes in the near-term, we have developed a scheme for implementing a subset of this approach on existing systems. It takes the format:

DESTINATION **@** ADDRESS

The "DESTINATION" field should may contain the STATION callslgn or the GROUP or APPLICATION name. Examples of this include **KA2BQE,** NTS, RATS or ALL.

The "ADDRESS" field will contain the telephone **AREA CODE** or the **STATE CODE.** The AREA CODE is prefered, because there is a **FREE 24-hour** directory service maintained by the telephone companies **(OPERATOR)** which can provide this information. This information is also available in every telephone directory in the country.

For those who are unable to access these resources, we suggest the use of the STATE CODE. This two character field will provide an alternative form which is popular with some members of the Amateur community.

Both of these forms may be **suffixed** with **additonal** information. **This is** convenient for applications that require finer granularity. The AREA CODE may be suffixed with the local telephone exchange or node number. The STATE CODE may be suffixed with the **first** three **digits of** the postal **"ZIP CODE".** These suffixes add little administrative overhead in the message systems because they have a **wildcard** facility **("*").** For example systems in Colorado need only maintain entries of **"201*",** **609*** and **NJ.*** for **ALL** messages bound for **New** Jersey.

Summary

This paper has outlined an approach to implicitly route messages through the Amateur Packet Network. The full proposal is already implemented on 50 **PRMBSs** throughout the country. The capability to support the interim subset on ALL OTHERS is available **NOW.** It can be accomplished through the addition of a few routing table entries. This proposal includes support for the popular addressing conventions without creating an administrative burden for the system operators. Further work will be required to help the user community understand and use these capabilities. RATS welcomes comments on this proposal.