# Providing Communications for a Worldwide Special Interest Ham Group

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## Abstract

This paper describes the forming of a special interest digital communication group, the need for worldwide intercommunication on a timely basis, and the evolution of a mix of communication channels utilizing the Internet. This ability to communicate rapidly has been one of the reasons for the explosive growth of the HPSDR group, the rapid design of several projects, and the synergy found with the association of many interested hams, well known experts, TAPR and AMSAT.

## Introduction

Radio Amateurs often pride themselves in being able to communicate via radio on a worldwide basis, but when it comes to rapid interchange of information and discussion amongst many individuals spread geographically, we fail miserably if we depend on high frequency propagation conditions.

In recent years, the Internet has come to our aid and rescue. It offers rapid or instant exchange of ideas by many participants. This proved to be true for our newly formed "community" of hams interested in advancing the software defined radio (SDR) technology in use by radio amateurs and others. In fact, our rapid growth and progress is the direct result of putting the Internet to good use.

### HPSDR Community

Back in early December of 2005, several participants of the Flex-Radio SDR-1000 discussion list (reflector) became interested in the possibilities of using FPGA devices with SDR designs. Once the message traffic on the list got to the point of disturbing the majority of list participants, I started our own separate discussion list. Back at that time, it was called the "xylo-sdr" list since the Xylo was a relatively inexpensive development kit for an Altera FPGA.

The next six months saw rapid growth of interest, a group name change to High Performance Software Defined Radio (HPSDR), and a great need for more intercommunication than just the discussion list. At one time, some of the communication took place on a forum style bulletin board.

We may not now have the perfect mix of communication channels set up, but so far in our rapid growth of interest and participants, it seems to be doing a good job. I'd like to describe and discuss each of our methods: discussion list, Teamspeak, web pages, and a wiki.

**Discussion List**

The main channel of nearly instant discussion has been the discussion list, often termed a reflector. The list allows any participant subscribed to it to read, post or reply to messages. All messages are archived for later reference if required. The list is hosted on a server running Mailman open source software and even though it has the capability of being moderated, the need has not arisen due to precautions taken in the subscription procedure. The Mailman stock subscription sign-up page was modified to require the new user to enter their ham call, or if not licensed, their full name. Once the user performs an email verification check, the request is forwarded to the list administrator for approval. I normally approve all requests immediately where the ham call is shown, but approve and place on moderation those who just give a full name. So far, we have not been bothered by spam nor any need to place the list on moderation.

Even though the forum style bulletin board is still available for posting messages, the vast majority of participants prefer the email discussion list.

**Teamspeak**

One of our HPSDR supporters, Eric Ellison AA4SW, has generously donated the use of a VOIP forum called Teamspeak. It has been used for quite some time for voice discussions of SDR-1000 operation and now is also used for HPSDR, TAPR, and AMSAT. Often the weekly formal session for SDR-1000 also contains much HPSDR discussion too, as the subject matter and participants are interrelated. Teamspeak allows voice communication with a large group at the same time. The big problem with Teamspeak is the time differences on our planet – what is convenient for U.S. members is not at the same time nice for our Aussie, UK and Euro participants!

**Website**

In early March, the community had grown large enough and was in the midst of dropping the Xylo kit and designing our own hardware and software. The name, High Performance SDR, previously used by Phil Covington N8VB, was chosen with his blessing for the new group name. Phil obtained the domain name of “hpsdr.org” for our use, and I promptly put up a skeleton website.

The design of the website pages were interesting. A free/open source consortium exists that has dozens of interesting website designs. I chose one and modified it to fit our use. Within a few weeks, we had a decent website with separate web pages for each project board or module. Our donated hosting has almost unlimited web space and monthly traffic, so it is in no way limited.

But we ran into two real problems: (1) Keeping the website up to date – projects were moving along so fast that it required daily changes to update the web pages, and (2) the project leaders/designers had no easy way to post diagrams, drawings, or pictures. Both problems were solved with a wiki.

**Wiki**

Many wikis are designed to allow any user to add or edit the contents. I did not want that headache and possibility of vandalism, so early on the decision was made to limit edit capabilities to a small number of trusted users – mainly the project leaders or others directly involved with project support.

Our HPSDR wiki solved the problem of keeping the web pages up to date by allowing the persons who were making the changes and advances to perform the updates to the wiki pages themselves. I went back

to the web pages and edited their contents to describe the projects in broad terms and then provided a link to the appropriate wiki page. The project leaders can directly upload files, pictures, etc. to the wiki.

My only regret in regard to the wiki was not implementing it sooner! It surely relieved the webmaster of much work and it ends up being an up to date source of information for all.

## Conclusion

Our mix and use of the Internet may not be optimal, and as technology changes we may adopt or adapt as the need arises. These have only been suggestions and what has worked well for HPSDR may not work for your group. For anyone finding themselves needing help with group communication such as I have described, I'll be happy to correspond with them to answer questions, share resources I've found, or to assist in hosting choices.

## Reference

HPSDR website: http://hpsdr.org