

The APRS Working Group

Charter and Bylaws

May 14, 1999

I. Introduction

Mission Statement

APRS, developed by Bob Bruninga, WB4APR, is an Amateur Radio digital infrastructure for realtime and tactical digital communications. It is designed to provide communications during emergencies, but it is recognized to support routine round-the-clock global communications as well. Its applications include mapping, messaging, telemetry, and tracking. It uses a standard protocol over RF links, supplemented by alternate communication methodologies.

The APRS Working Group

The APRS Working Group (“Group”) is an unincorporated association whose members undertake to further the use and enhance the value of the APRS protocols by (a) maintaining and publishing a formal APRS Protocol Specification; (b) publishing validation tests and other tools to enable compliance with the Specification; (c) supporting an APRS Certification program; and (d) generally working to improve the capabilities of APRS within the Amateur Radio community. This document describes the organization and operation of the Group.

Although the Group may receive support from TAPR or other organizations, it is an independent body and is not affiliated with any organization. The Group will have no budget, collect no dues, and own no assets.

II. Statement of Principles

At a meeting near Baltimore, Maryland on May 1-2, 1999, and in email communications in the days following, the Group members agreed to the following principles that will govern their behavior and that of the Group:

1. Bob Bruninga has been the primary developer of the APRS concept. He owns the APRSdos computer program, the APRSdos documentation, and the APRS trademark, and retains the right to license these items to others.
2. All Group members agree that in the spirit of Amateur Radio, the on-air protocols themselves should be open to general Amateur Radio development and not be restricted by copyright.
3. Existing agreements between or among APRS developers are unaffected by this Charter.

4. The Group will formalize the APRS on-air Protocol Specification and publish a definitive APRS protocol document. Present plans are to make the specification in book and diskette form, and possibly to provide it via electronic distribution.
5. A process will be put in place to define how changes to the protocol specification are made, and that process will permit input, review, and comment by the Amateur Radio public.
6. The Group will put a voluntary APRS certification process in place, to be managed by Bob Bruninga with Group oversight. The process will include a publicly available validation suite.

III. Membership

The initial Members of the Group are Bob Bruninga, WB4APR (Technical Chair), Keith Sproul, WU2Z, Mark Sproul, KB2ICI, Steve Dimse, K4HG, Greg Jones, WD5IVD (representing TAPR), Mike Musick, N0QBF, Brent Hildebrandt, KH2Z, John Ackermann, N8UR (Administrative Chair), and Stan Horzepa, WA1LOU (Secretary).

The Technical Chair will be responsible for guiding the overall discussion and resolution of APRS-related issues. The Administrative Chair will be responsible for managing the virtual and electronic meetings of the Group, overseeing the process for updating the Protocol Specification process, and will serve as the Group “parliamentarian.” The Secretary will be responsible for keeping records of the discussions and decisions of the Group.

New Members may be added upon motion of any current Member provided that 67% of the existing votes being cast in favor. Members may be removed upon motion of a Member provided that 75% of the existing votes are cast for removal. Organizational Members (e.g., TAPR) may nominate the person who will speak on their behalf, and may change the name of that person by providing written or email notice to the Secretary and Administrative Chair.

IV. Meetings and Voting

The Group and its Committees will be in continuous electronic session. Although the Group intends to have at least one in-person meeting per year, such meetings are not required.

Electronic meetings will be conducted by email. An archive of messages will be maintained and will be available for review by any Member. Votes taken by email will occur over a ten day period after the question is called. At the conclusion of the voting period, the Secretary will announce the results via email to all Members.

Each Member will have one vote, except that: (a) the Technical Chair will have two votes; (b) the Administrative Chair will vote only in the case of a tie among the other votes cast; and (c) the Secretary will have no vote.

Except as otherwise provided in this Charter, votes will be valid when a quorum of the Members is present. At in-person meetings, the presence of persons controlling 67% of the eligible votes will be considered a quorum. For votes taken electronically, a quorum will be present for the vote if 67% of the eligible votes have been cast at the end of the voting period. Voting by proxy will not be permitted.

This Charter may be amended at any time by motion approved by 67% of the existing votes.

V. Protocol Committee

The APRS Protocol Specification is the formal definition of the data elements and message formats used to communicate between APRS devices via wireless or wired (e.g., Internet) connections. It does not include user interface or other elements that do not affect the content or format of these interface components.

The Protocol Committee, which presently consists of all Members, is responsible for the APRS Protocol Specification. It manages the process for publishing and updating the Specification, and for receiving public comment on proposed changes.

The Protocol Committee intends to publish Version 1.0 of the APRS Protocol Specification by the end of October 1999. The first draft of the Specification will be made available to the Amateur Radio community by the end of June 1999, and comments will be accepted as defined below.

The Protocol Specification will define “Mandatory” and “Optional” elements, and will take into account the requirements for various types of APRS-compatible products.

Committee Operations and Community Input

Input from the APRS user community, other APRS developers, and the Amateur Radio community at large is a key component of the protocol development process. To ensure this input, the following process will be used to amend or revise the Protocol Specification:

1. Proposed revisions to the Specification may be submitted by any person, and will be published at the Group web site.
2. For thirty days after publication, any person may submit comments to the proposal. Comments will be published at the Group web site. The comment period may be extended by majority vote of the Committee. Rebuttal comments

will not ordinarily be considered, but an exception to this rule may be made by a majority vote of the Committee.

3. At the end of the comment period, the Administrative Chair will collect all comments and deliver them to all Committee Members.
4. The Committee will undertake a thirty day discussion period (which may be increased to sixty days at the request of any two Members) to consider the proposal. During the discussion period, the proposal may be amended by majority vote. Such amendments may, but need not, be published for comment at the Group web site.
5. At the end of the discussion period, the Committee will vote to accept or reject the proposal, or defer it for further consideration. Acceptance will occur if 67% or more of the votes cast are in favor; further consideration will occur if less than 67% but more than 33% of the votes cast are in favor; the proposal will be rejected if less than 33% of the votes cast are in favor. Alternatively, the proposal may be directly deferred for further consideration by a motion approved by majority vote.
6. If the proposal is deferred, an additional discussion period of sixty days will occur, after which another vote will be taken. The Committee may choose to solicit additional comments, but is not required to do so. At the close of the discussion period, the proposal will be accepted if 67% or more of the votes cast are in favor, and rejected otherwise.
7. After the proposal has been accepted or rejected, that fact will be published at the Group web site.
8. If the proposal is accepted, the Committee will determine the effective date of the change, and will publish that date at the Group web site.
9. The Group will publish revised versions of the Specification at intervals recommended by the Committee. Revisions will be official as of their effective date whether or not the published Specification has yet been updated to incorporate that Revision.

The Protocol Committee will also develop and publish standards and processes for the assignment of new Icons and “TO Field” calls and will approve, by a majority vote, requests for such assignments.

VI. Certification Committee

The Group wants to encourage the development of products that properly implement the APRS protocols. To that end, the Certification Committee, which is initially composed

of all Group members, will establish a Certification Program. Certification is wholly voluntary on the part of an APRS product developer, and the Certification Program is available on an equal basis to any developer.

The Program is based on the following principles:

1. The Committee will develop and approve a Validation Suite, which will be the primary basis for Certification. The Suite will consist of test inputs and a description of how a product complying with the Protocol Specification should react to each of these inputs. The suite will be based on the TAPR TNC-2 packet display format. The Validation Suite will be made available to the public without charge, but software developed to automate testing may be subject to a license fee from the author.
 2. Bob Bruninga will manage the Certification Program on behalf of the Committee, subject to oversight by the Committee.
 3. Subject to compliance with a Certification Agreement that must be signed before Certification is granted, Certified Products will be permitted to display or be advertised in conjunction with an “APRS Certified” trademark and logo. The trademark and logo are owned by Bob Bruninga and are licensed subject to the Certification Agreement.
 4. Certified Products must successfully complete the Validation Suite, but applicants must acknowledge that additional testing may be necessary to ensure that a given Product properly implements the Protocol Specification, and agree to reasonably cooperate with such testing.
 5. The Certification Fee is \$150 plus a Royalty based on the suggested retail price of the Certified product, to be paid to Bob Bruninga as compensation for the cost of the Certification process, and as a license fee for use of the APRS Certified trademark and logo.
 - a. The Royalty is 5% of the suggested retail price for software and 2% of the suggested retail price for hardware. Certified Products that are distributed without charge are not subject to Royalties. Shareware products are subject to Royalties based on actual registrations, not on copies distributed. The Certification Fee counts dollar-for-dollar as a credit against future Royalties.
 - b. The Committee may negotiate discounts as deemed appropriate for volume or special circumstances.
1. Certification is intended to be a “one-time” event for a given Product, and re-certification will not normally be required as new product versions or models are

introduced. However, Certification holders will be expected to keep the Product in compliance with the protocol – both through protocol changes, and product changes.

2. The Certification process is largely self-managed. The applicant must run the validation suite and submit results with the application. The Committee will conduct such testing as it deems necessary to verify the Product’s conformance to the Protocol Specification.
 - a. As part of the application, the applicant will be required to define the “Product” to be covered by the Certification, and this definition will be subject to Committee approval.
 - b. After Certification, the Committee may require the holder to resubmit proof of compliance, based on the then-current Validation Suite, at any time.
 - c. The holder must notify the Committee of major Product updates or upgrades, and submit validation results for such new releases.
 - d. It is the applicant’s responsibility to arrange for any special items (e.g., special hardware interfaces) necessary to validate a Product’s compliance.
 - e. If a product does not meet the requirements for Certification, the Committee will provide details of the failure. The applicant may resubmit the test results once within 90 days without additional charge.
 - f. If the Committee becomes aware of issues related to the Product’s compliance with the Protocol Specification, it may request the holder to respond and may ultimately cancel the Certification if the non-compliance is not corrected.
1. In some circumstances, Bob Bruninga as administrator of the program may have a perceived conflict of interest. In that case, he may request another Committee member to handle that application.
2. Any applicant who disagrees with a decision of the Program administrator may appeal in writing to the Certification Committee. The Committee may request additional information, and will accept or reject the appeal based on a 67% vote.
3. Prior to being granted Certification, the applicant will be required to execute a license agreement that will, among other things, contain trademark usage requirements clearly describing how the “APRS Certified” trademark and logo may be used.

This APRS Working Group Charter is agreed by each Member as of the date below:

Bob Bruninga

Mark Sproul

Keith Sproul

Steve Dimse

TAPR (by Greg Jones)

Brent Hildebrand

Mike Musick

John Ackermann

Stan Horzepa