APPN Implementers' Workshop Procedures Manual

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Preface

This manual describes the APPN Implementers' Workshop (AIW) and documents the procedures it uses to accomplish its objectives. The AIW is sponsored by IBM.

Intellectual property rights are governed by an agreement between IBM and each AIW member. Information as to the terms and conditions of the standard member agreement may be obtained from the AIW Chairman, Chuck Brotman.

"Advanced Peer-to-Peer Networking" and "APPN" are trademarks of IBM Corporation.

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Chapter 1. Purpose

Advanced Peer-to-Peer Networking (APPN) is an open architecture that extends the capabilities of IBM's Systems Network Architecture (SNA) to provide dynamic but predictable, reliable and cost-efficient peer-to-peer networking.

IBM is sponsoring the APPN Implementers' Workshop (AIW) to facilitate the availability of fully-interoperable, high quality APPN products from a wide variety of vendors. The AIW serves as a forum for members to share information about APPN, its implementations and customer experiences; to help one another with implementation problems; to develop any necessary enhancements; and to promote the use of APPN. Additionally, the AIW may serve as a similar forum for AIW members in selected related technologies and topics of interest.

The sharing of non-confidential information among users, implementers, and architects of APPN and related technologies is expected to help the customers of the member companies. The benefits of interoperability and high quality will be realized by focusing on the common interests of the participating vendors.

- Sharing implementation experiences will help reduce errors, improve performance, and reduce costs.
- Developing testing vehicles will help improve conformance, interoperability, and quality.
- Reviewing customer experiences will help identify additional requirements for ease of installation and use, management, performance, and function.
- Developing common solutions for commonly agreed upon requirements will improve interoperability and reduce costs.

Chapter 2. AIW Operation

2.1 Overview

The AIW meets regularly to conduct business and to pursue its technical and non-technical objectives. The overall management of the AIW operation is provided by the AIW Chair. Technical activities are guided by the AIW Technical Plan. The AIW establishes subgroups to address work areas of interest to the AIW and to produce proposals for approval by the AIW. Approval is by consensus.

2.2 Participation and Membership

Participation in the AIW is open to any person who has an interest, as an implementer or user, in APPN or one of the related technologies. A person participates in the AIW by contributing to the activities of the AIW, for example, by attending AIW meetings or taking part in the work of the subgroups. The AIW establishes Special Interest Groups (SIGs) to address work areas of interest to the AIW and to produce proposals for approval by the AIW. The AIW may also establish and/or host Related Interest Groups (RIGs) and "Birds of a Feather" (BOF) sessions to address topics which are related to APPN and the purpose of the AIW. A BOF may be preliminary to the creation of a SIG or RIG. The AIW maintains a distribution list of participants; anyone with a serious interest in APPN may ask to be added to the distribution list by contacting the AIW Chair.

An organization or individual becomes an **AIW member** by signing the agreement governing intellectual property rights. (See “Preface.”) Only AIW members have a voice in the determination of consensus on matters under consideration for approval by the AIW. The AIW Chair may ask that each member organization designate a representative as a spokesperson on matters of consensus.

2.3 AIW Meetings

The AIW conducts its business at regularly scheduled meetings. Three to four meetings are held each year in public locations. In order to recover the costs of the meeting, a meeting fee is charged for each individual that attends any portion of any AIW meeting.

The structure of an AIW meeting includes both plenary sessions of the AIW and working meetings such as SIGs, RIGs, and BOFs. There is a concluding AIW plenary session to hear reports from the SIGs, RIGs or BOFs and to act upon requests for AIW approval.

2.4 AIW Chair and Document Administrator

The AIW has a Chair and a Document Administrator that are responsible for its operation.

2.4.1 AIW Chair

The responsibilities of the Chair are to:

- conduct the business of the AIW;
- develop and maintain the Technical Plan, with the approval of the AIW;
- determine the AIW meeting schedule and venue;
- chair the AIW plenary sessions;
- declare whether AIW consensus exists on matters under consideration for approval;
- appoint SIG chairs;
- coordinate the work of the SIGs, RIGs, and the AIW to ensure that the objectives of the AIW Technical Plan are achieved; and
- keep the AIW participants informed of the activities of the AIW.

The AIW Chair is appointed by IBM.

2.4.2 AIW Document Administrator

The responsibilities of the Document Administrator are to:

- maintain the architecture of record;
- maintain the document library; and
- publish the APPN architecture of record as indicated in the Technical Plan.

The AIW Document Administrator is appointed by IBM.

2.5 Technical Plan

The technical goals of the AIW are set out in the Technical Plan. It describes the technical activities of the AIW, provides the schedule for their completion and approval by the AIW, and contains the schedule for publication of the APPN architecture and related architectures and topics addressed by the AIW or its subgroups. The technical plan is developed and maintained by the AIW Chair with review and approval by the AIW.

2.6 Architecture of Record

The architecture of record is the official definition of APPN as maintained by the Document Administrator. Although there will be a transition period, changes will be made to the architecture of record through the architecture approval process described in 2.8, "Architecture Approval." During the transition period, IBM will be adding work in progress into the architecture of record.

The current APPN architecture is published in the *SNA APPN Architecture Reference*, SC30-3422, and, for management functions, in the *SNA Management Services Reference*, SC30-3346. Current formats associated with the APPN architecture are published in *SNA Formats*, GA27-3136. Additional documents may be added to the architecture of record as described in 2.8.2, "Approval Levels for APPN Architecture" and in 2.9, "Architecture Interpretation." The documents may be available either electronically through the AIW or in hard-copy and on CD-ROM via IBM's normal publication distribution means.

2.7 Approval Process

Note: While many of the procedures, requirements, and guidelines in this chapter and elsewhere in this manual are written specifically for APPN Architecture and must be applied by the SIGs, the AIW encourages RIGs working on related technologies to follow similar guidelines for their work and extensions.

Approval generally occurs at regularly scheduled AIW plenary meetings and is by consensus among the AIW members present at the meeting. A provision for approval of APPN extensions between AIW meetings is described below.

2.7.1 Consensus

AIW members have many, sometimes competing, interests. The basis of consensus in the AIW is the common interests of the members as expressed in Chapter 1, "Purpose," in the Technical Plan, and in the Appendix, "Guidelines for Extensions." A consensus is reached with respect to a proposal under consideration when there is little or no substantive objection from members. The AIW Chair focuses deliberations on the common interests and the schedule and priority as laid out in the Technical Plan and determines when consensus has been reached.

2.7.2 Matters Requiring Approval

The following is a list of matters requiring the approval of the AIW. Additional matters may be added as deemed necessary by the AIW Chair.

- Matters of procedure are:
  - the Technical Plan;
  - establishment of SIGs, RIGs, and BOFs and their scope of work to address work areas of interest to the AIW; and
  - establishment of liaison relationships with other organizations.
- Matters of architecture are:
  - APPN architecture fixes;
  - APPN architecture Base and Options set changes; and
  - APPN architecture extensions.

2.7.3 Approval Levels for matters of procedure

The approval for matters of procedure is less formal than for architecture changes. The approval levels and the level of documentation required for procedural matters is determined on a case by case basis by the AIW Chair in consultation with the responsible SIG or RIG. However, the following levels are defined.

- Approved Direction (AD): the approved procedural change represents the AIW's direction.
- Approved: the approved document has final AIW approval.

2.8 Architecture Approval

The architecture approval process governs the addition of extensions to the APPN architecture of record. In addition, AIW-established guidelines for extensions to APPN are listed in the Appendix, “Guidelines for Extensions.”

No architecture extension is approved without its description in a written contribution to the AIW, a **submission**. To be considered for progression to the next level of approval a submission must be available in the document library at least two weeks in advance of the AIW meeting at which the approval is to be requested. Further, the AIW must be notified at least two weeks in advance of requests for approval at a meeting.

2.8.1 Approval between Meetings

While typically AIW approval occurs at the AIW meetings, a SIG (or Rig) can request approval of an APPN (or related architecture) extension between AIW meetings. Approval between meetings is granted if there is consensus among AIW members as determined by the AIW Chair.

2.8.2 Approval Levels for APPN Architecture

APPN changes under consideration for addition to the architecture of record progress through three levels of approval. Because of resource constraints, model limitations, or format needed for submissions to standards bodies, some architecture enhancements may not be integrated into the existing architecture of record. "Pages" submitted for approval may be changes to the existing architecture of record, new specifications (e.g., RFCs) or changes to specifications.

AD A submission that is given **Approved Direction** status represents the AIW's direction for addition of the new function to APPN.

AP A submission that is given **Approved Pages** status contains the AIW's approved specific changes to the architecture of record for the new function.

- For those changes that are to be integrated into the existing architecture of record documentation, once AP is achieved, the changes are incorporated into the architecture document and the architecture document is made available to the AIW. The changed architecture, in context, is clearly identified. The updated architecture of record receives its last examination by the AIW.
- For those changes that are to be added to the architecture of record as a separate document (either temporarily or indefinitely), minor changes may be made prior to the final review by the AIW.

CP Any minor modifications made between AP and requesting **Closed Pages** are clearly identified. Final AIW approval adds the new function to the architecture of record.

After CP is achieved, editorial (non-technical) changes may be made to the document as required for publication. Such changes may include art work, minor wording changes for clarity, indexing, etc.

2.8.3 Submission Requirements

A submission of an extension or change is subject to the provisions of an agreement between IBM and the submitting member. The AIW does not accept submissions not covered by such an agreement. (See 2.8.4, "Intellectual Property Rights in Submissions" for a statement that applies to all AIW members regarding intellectual property rights.)

To be considered for approval, a submission should contain information at a level of detail appropriate to the approval level requested. The specific requirements for each level are described below.

AD The submission should contain at least the following:

- requirements for the new function;
- description of the solution, specifically the changes to APPN, including new or changed:
  - terms and concepts;
  - normal (i.e., non-error) case analysis with internodal flow diagrams;
- general layering and node structure considerations;
- rationale for the selected solution, including major alternatives considered but not selected; and
- a size estimate (in lines of code).

AP The submission must be sufficiently complete so that implementing products will be able to interoperate; it must contain a clear and complete specification of all necessary changes (text, figures, examples, tables, etc.) to the architecture of record. In addition to the materials needed for AD, the following information should also be provided:

- a description of all the changes to the architecture of record, including exception-condition handling;
- complete and reasonably precise descriptions of system externally visable states and their transitions (e.g., finite state machines, pseudocode, etc.);
- new and changed internodal flows;
- format descriptions; and
- option set dependencies.

2.8.4 Intellectual Property Rights in Submissions

The specific intellectual property rights of each member are set forth in the AIW membership agreement entered into between that member and IBM. IBM will not enter into an AIW membership agreement having terms inconsistent with the following intellectual property terms.

2.8.4.1 Copyrights and Trade Secrets

As the AIW is a forum aimed at promoting APPN and extensions to APPN as industry standards, members must assume that material included in submissions will enter the public domain. Therefore, submissions must not include confidential materials. Any copyrighted material may be copied by member companies for use in evaluating the submission. If a submission is adopted by the AIW, IBM has a royalty-free right to include the submission in published APPN reference documents.

2.8.4.2 Trademarks

It seems unlikely that trademark issues are likely to arise in the course of consideration and use of submissions by the AIW, its members, or any other organization receiving the submission through the AIW or an AIW member. An AIW member making a submission must agree that it will not attempt to restrict consideration or use of the submission on any theory that such consideration or use is contrary to the member's trademark rights.

2.8.4.3 Patents

A submitter does not waive patent rights in inventions included in its submissions. However, it is expected to identify any known patents (its own or others) which would have to be taken into account in implementing the submission and/or to indicate whether it intends to seek patent protection on any invention included in the submission.

Where implementation of a submission may require license(s) under patent(s) of an AIW member, that member must offer to make such license(s) available under reasonable and non-discriminatory terms unless:

1. the submission originated with a party other than the patent owner; and
2. the patent owner expressly objected to adoption of the submission during its consideration by the AIW.

2.8.4.4 Proposals to Standards Organizations

Standards organizations, such as IETF, may have legal criteria for consideration of proposals that are more stringent than the above. The AIW Member must be prepared to accept requirements such as the above from standards organizations with which the AIW elects to work. It is anticipated that any unusual requirements will be discussed during consideration of a submission in a SIG, RIG, or plenary session.

2.9 Architecture Interpretation

In the event of the discovery during development of an ambiguity in the architecture of record, an implementer may request an interpretation by the AIW Reference SIG. The AIW Reference SIG will issue an interpretation, circulating it to the AIW. The requester of the interpretation may, if not satisfied with the decision, appeal the interpretation to the AIW Chair, in which case it will be considered at the next AIW meeting. An appeal must be made at least two weeks in advance of the AIW meeting at which the matter will be decided. The interpretation or the result of the appeal is documented and becomes part of the architecture of record.

Chapter 3. Special Interest Groups

The AIW establishes Special Interest Groups (SIGs) to address APPN Architecture work areas of interest to the AIW. For example, the SIG's work may be the definition of an APPN extension to meet a requirement for new APPN function. This section describes the operation of the SIGs.

3.1 Overview

3.1.1 Scope of Work

A SIG is established to address a particular work area. A statement of the SIG's scope of work is approved by the AIW in the Technical Plan.

3.1.2 Schedule

A schedule for completion of the SIG's work is established by agreement between the SIG and the AIW chair.

3.1.3 Responsibilities

It is the responsibility of the SIG to produce, on the agreed schedule, a documented proposal for AIW approval that addresses the SIG's work area. The SIG maintains responsibility through the approval process until final consensus is reached.

3.1.4 Output

Typically the output of the SIG is a document or set of documents describing the solution or proposed direction. The requirements for submissions for APPN extensions have been described above. For other matters, the required material to be described in the documentation is dependent on the matter being addressed. It is determined by the AIW Chair in consultation with the SIG.

3.2 Participation

Any person who has an interest in APPN may participate in the activities of a SIG. Only AIW members may contribute submissions containing technical proposals and have a voice in matters of consensus.

3.3 SIG Meetings

Generally, SIGs hold work meetings during the AIW meetings; they may hold meetings at other times as required.

3.4 SIG Chair

The SIG chair is appointed by the AIW chair. The responsibilities of the SIG chair are listed below.

- Prepare the statement of the SIG's scope of work for AIW approval and the schedule for the SIG's output and its approval by the AIW. This is by consultation with the

SIG participants and with the AIW chair. The AIW chair should be informed of any changes to the SIG's schedules.

- Manage the architecture process for the SIG. Ensure that the appropriate documentation is prepared. Arrange with the AIW chair the time needed on the AIW agenda for SIG meetings and for presentations to the AIW plenary. Report the SIG's progress to the AIW plenary. Inform the AIW Chair of intent to request approval of the SIG's output.
- Chair the SIG meetings.
- Achieve consensus within the SIG. Resolve issues. Report to the AIW any unresolved issues.
- Manage the logistics of the SIG. Call SIG meetings as necessary. Keep the SIG informed of relevant information. Maintain the distribution list for the SIG. Put SIG documents in the document library.

3.5 Approval Process

The work within the SIG proceeds by consensus among participants. The SIG chair is responsible for determining the consensus as outlined in 2.7.1, “Consensus.”

Final approval of the SIG output is granted by the AIW.

3.6 Coordination with Other Subgroups

The necessary coordination of the work of a SIG with the related work of other SIGs and RIGs is the responsibility of the SIG chair and the AIW Chair.

Chapter 4. Related Interest Groups

The AIW may establish and/or host Related Interest Groups (RIGs) to address work areas which are related to interests of the AIW but do not meet the requirements of a SIG. For example, the RIG's work may be the definition the architecture of a related networking technology which is not under the direct purview of the AIW. This section describes the operation of RIGs.

4.1 Overview

4.1.1 Scope of Work

A RIG is established to address a particular work area. As part of the establishment of a RIG a statement of the scope of work is reviewed by the AIW Chair.

4.1.2 Schedule

A schedule for completion of the RIG's work is established by agreement between the RIG and the AIW chair.

4.1.3 Responsibilities

It is the responsibility of the RIG to produce, on the agreed schedule, a documented proposal that addresses the RIG's work area. The RIG maintains responsibility through the approval process until final consensus is reached.

4.2 Participation

Any person who has an interest in the activities of a RIG may participate. Only AIW members may contribute submissions containing technical proposals. All participants in the RIG will abide by the rules of the AIW as set forth in this document.

4.3 RIG Meetings

Generally, RIGs hold work meetings during the AIW meetings; they may hold meetings at other times as required.

4.4 RIG Chair

The responsibilities of the RIG chair are listed below.

- Prepare the statement of the RIG's scope of work and schedule for AIW review. This is by consultation with the RIG participants and with the AIW chair. The AIW chair should be informed of any changes to the RIG's schedules or scope of work.
- Manage the architecture process for the RIG. Ensure that the appropriate documentation is prepared. Arrange with the AIW chair the time needed on the AIW agenda for RIG meetings and for presentations to the AIW plenary. Report the RIG's progress to the AIW plenary.
- Chair the RIG meetings.

- Achieve consensus within the RIG. Resolve issues.
- Manage the logistics of the RIG. Call RIG meetings as necessary. Keep the RIG informed of relevant information. Maintain the distribution list for the RIG. Put RIG documents in the document library.
- Inform the AIW of the RIG progress and status. The RIGs results should be shared with the AIW at a Plenary session and documentation made available to AIW members via the normal methods.

4.5 Coordination with Other Subgroups

The necessary coordination of the work of a RIG with the related work of other SIGs and RIGs is the responsibility of the RIG chair and the AIW Chair.

Chapter 5. Liaison relationships

The AIW, recognizing that other organizations are pursuing related work or have an interest in the work of the AIW, will establish relationships with other organizations as needed.

An informal relationship has been established with the IETF in that several IETF work groups have met at the AIW.

Chapter 6. Logistics

6.1 Communication Facilities

It is the intention of the AIW to use electronic means for communication and for conducting AIW business to the extent possible. Use of the following electronic facilities has been established.

Internet E-Mail will be used for

- General AIW communications
- Distribution of meeting notices and minutes
- SIG and RIG communications.

The Internet File Transfer Program will be used for

- Document distribution
- Document library.

The AIW mail exploders and document libraries are located on ibmstandards.cary.ibm.com.

6.2 Documentation

The AIW Document Administrator maintains a document library of materials contributed to the AIW. The documents may be obtained electronically.

6.2.1 AIW Documents

- The APPN architecture of record is maintained by the Document Administrator.
- Electronic copies of contributed documents are stored in the document library. Maintenance of the document is the responsibility of the document owner, typically the person who contributed the document.

Appendix. Guidelines for Extensions

The AIW recognizes that the addition of new function to the APPN architecture or related technologies requires consensus among a variety of member companies whose interests may not be identical. In order to provide a basis for the development of consensus, the AIW has established the following guidelines for extensions.

- Existing conforming implementations must continue to work properly after new function has been added to the network.
- New function should have general applicability across platforms and environments.
- New function should be implementable on multiple hardware/software platforms.
- The addition of new function to APPN or related technologies should be based on considerations of technical merit, including:
  - function,
  - ease of use,
  - efficiency,
  - implementability, and
  - extendability.