



AAF FAQ

NAB 2004

1. The New AAF Edit Protocol™

1.1. *What is the AAF Edit Protocol?*

The AAF Edit Protocol codifies the experiences and best practices learned by the manufacturers that brought the first AAF supporting products to market. The Edit Protocol specification document is a companion to the AAF specification, SDK, reference implementation and documentation.

1.2. *What does the AAF Edit Protocol Offer End Users?*

The primary goal of the AAF Edit Protocol is to deliver consistent, dependable, and predictable results for interchange of editorial information between applications; especially products from different manufacturers.

1.3. *How Does the AAF Edit Protocol Benefit Manufacturers and Developers?*

The second goal of the Edit Protocol is to simplify the task of adding AAF support to new and existing products. The AAF Edit Protocol is much more specific than the more generalized AAF Specification. The protocol details implementation requirements and documents the lessons learned by the AAF developers who first brought implementations to market. The Edit Protocol will make it easier and less costly to implement AAF in products.

1.4. *What is the Difference between the Edit Protocol and the AAF Specification?*

The Edit Protocol takes a subset of the AAF Specification, and provides constrained guidelines for implementation. The edit protocol focuses on implementing AAF to ensure that edit metadata can be shared between applications with confidence.

1.5. *Is the AAF Edit Protocol Available in Open Source?*

YES. The AAF Edit Protocol is implemented in the AAF SDK and reference implementation in addition to the published specification document.

2. The AAF Association

2.1. *What is the AAF Association?*

The AAF Association Inc. is a broadly based trade association created to promote the development and adoption of AAF technology. AAF technology allows content creators, editors and rich media authors to exchange video, audio, images, text and metadata between applications.

2.2. *Who belongs to the AAF Association?*

Principal Members

Adobe Systems, Inc.
AOL/Time Warner (including CNN, Turner Entertainment and Warner Bros.)
Ascent Media
Avid
British Broadcasting Corporation
Discreet
Microsoft
National Imagery & Mapping Agency
Pinnacle (including Fast Multimedia)
Quantel
Snell & Wilcox

General Members

Apple
blue order, Inc. (a tecmath company)
Fox
Panasonic
SGI
Thomson Grass Valley

Associate Members

BAE Systems
Cakewalk
Colorfront
E! Entertainment
Eastman Kodak
Korean Broadcasting System
Nucoda
OmniBus Systems
The Post Group
S4M - Solutions for Media
SADiE
Sony

Developer Members

Agnostic Media, Inc.
Automatic Duck, Inc.
Brooks Harris Film & Tape
Curious Rabbit Software
Dark Matter Digital
Diaquest Products
Digital Accelerant
Merging Tech
Metaglu
Perspective Media Group
Preview Multimedia
Profound Effects
Synthetic Aperture
Universitat Pompeu Fabra

Supporters

Baylor University
SYPHA

2.3. *When was the AAF Association created?*

The association was incorporated in January of 2000. For more information, look at our press release on our Web site: www.aafassociation.org

2.4. *What is the mission of the AAF Association?*

The mission of the AAF Association is to facilitate the exchange of images, sound and metadata across platforms and applications.

2.5. *How does the AAF Association accomplish its mission?*

By promoting the Advanced Authoring Format as a means of interchange of program content and metadata in a mixed-vendor environment. By holding Developer

Conferences to educate programmers so that they can more easily use the AAF SDK. By holding Awareness Events to educate the industry on the power of AAF.

2.6. *Can anyone become a member of the AAF Association?*

Yes. Anyone with an interest in the issues surrounding the exchange of program content and metadata in the rich media environment is welcome to join the AAF Association.

2.7. *What are the benefits of becoming a member of the AAF Association?*

For the broadcast and post community, involvement with the AAF association provides a unique opportunity to influence working practices of the future. For manufacturers, involvement with the AAF Association means active participation in a project that will have a fundamental impact on the markets for their products, allowing the full benefits of digital working to be realized.

Additionally, member benefits include access to AAF Sample files, tutorials, example codes and UML. Members also are allowed to participate in Awareness Events, and to receive priority listing in our Developer Resource Directory.

2.8. *What classes of membership are available?*

The AAF Association has four classes of membership – Principal, General, Associate and Developer.

Principal Members:

enjoy all the benefits of General Membership
are eligible for election to the Board of Directors
Cost is \$10,000 per year

General Members:

may appoint voting representatives to each of the AAF Association committees
may propose new extensions and additions to the AAF Specifications
receive electronic copies of all AAF specifications and publications
receive support for the AAF specification and associated Software Development Kit
Cost is \$7,500 per year

Associate Members:

may appoint non-voting representatives to each of the AAF Association committees
receive electronic copies of all AAF specifications and publications
receive support for the AAF specification and associated Software Development Kit
Cost is \$3,000 per year

Developer Members (with five or fewer employees):

may appoint voting representatives to each of the AAF Association committees
may propose new extensions and additions to the AAF Specifications
receive electronic copies of all AAF specifications and publications

receive support for the AAF specification and associated Software Development Kit
Cost is \$500 per year

Note: that in addition to the four classes of membership listed above, the AAF Association may also establish liaison relationships with other associations and standards bodies on a no-cost basis.

2.9. How does the AAF Association relate to work on the AAF Specification?

Work on the AAF Specification takes place in Working Groups established by the AAF Association.

2.10. How can I join?

The easiest way to join the AAF Association is to go to our Web site, www.aafassociation.org, and click on the "Join Us" tab. Select the class of membership you are interested in and then fill out a brief form. We will contact you to complete the sign-up process. You can also send email to info@aafassociation.org.

2.11. What is the status of the AAF Association from a legal standpoint?

The AAF Association is registered in the state of Delaware as a non-profit corporation.

2.12. Does the AAF Association have independent leadership?

Yes. The AAF Association Executive Director, Brad Gilmer has over 20 years of experience in broadcast operations and production. He is currently President of Gilmer & Associates, Inc., a consulting company that specializes in strategic business issues surrounding technology for rich media. Gilmer also chairs several committees of the Society of Motion Picture and Television Engineers, and is Executive Director of the Video Services Forum.

Gilmer was formerly Director of Engineering and Operations at Turner Broadcasting Systems in Atlanta. He writes a column for Broadcast Engineering magazine, and makes frequent presentations at all major industry conventions.

2.13. Who is on the board of directors of the AAF Association?

The AAF Board members elect the AAF Association's board of directors. The current board of directors includes Stephane Blondin, Snell & Wilcox; Gordon Castle, Cable News Network; Tim Claman, Avid; Walter Ferrero, Discreet; Brad Gilmer, Executive Director of the AAF Association; Jon Pannaman, Quantel Ltd; Skip Pizzi, Microsoft; Christian Schormann, Pinnacle Systems; Gavin Schutz, Ascent Media; David Trescot, Adobe Systems; and Phil Tudor, The British Broadcasting Corporation.

3. 2. The Advanced Authoring Format

3.1. *What is the Advanced Authoring Format?*

The Advanced Authoring Format (AAF) is a professional file interchange format designed for the post production and authoring environment. AAF solves the problem of multi-vendor, cross-platform interoperability for computer-based digital production. AAF does a number of things. 1) it allows complex relationships to be described in terms of an object model, 2) it facilitates the interchange of metadata and/or program content, 3) it provides a way to track the history of a piece of program content from its source elements through final production, 4) it makes it possible to render downstream (with appropriate equipment), 5) it provides a convenient way to "wrap" all elements of a project together for archiving. By preserving comprehensive source referencing, and abstracting the creative decisions that are made, AAF improves workflow and simplifies project management. For more information, see the various resources under the 'Technical' tab at the top of this FAQ.

3.2. *Why do we need it?*

Bob Turner has written an excellent article that answers this question, and it is available on our Web site: www.aafassociation.org

With the accelerating progress of digital technologies, an open interchange standard is essential to enable the digital production facilities of the future. The lack of integration of multi-vendor products has proven to be a significant obstacle to the rapid acceptance of computer based digital tools for professional production. AAF represents a broad industry initiative to remove those obstacles.

3.3. *Can AAF be used as a native file format?*

Yes.

3.4. *When will products using AAF be available?*

AAF is already shipping in a number of products. For the latest list of AAF products, contact member manufacturers directly. Check the current list of members.

3.5. *How does AAF relate to program content?*

Program content or essence such as video and audio can be wrapped along with metadata in an AAF file. Alternatively, the metadata may be sent by itself, with external references to the original material. The AAF structure is designed so that, if program content is included, the AAF metadata header can be "snapped off", and the program content can be played directly, if that content is completely rendered and ready for air.

3.6. *How does AAF relate to QuickTime?*

QuickTime is a technology that incorporates a file format standard optimized for play back and streaming media. It handles a variety of media formats, invoking effects, and playing QuickTime files. The metadata support in QuickTime is focused on information needed to play or stream the file.

AAF is not necessarily intended as a playable or streamable file. An AAF file functions like a super EDL, cut list, or run down. When the AAF file includes media locators to accompanying media, complex edits can be transferred from one production department to another, or from production to publication without having to re-conform the edit. The file includes sufficient information for a program to be assembled automatically by equipment with appropriate capabilities. AAF also lets the user track the history of material from the finished program back to the original recording or even a storyboard. This is especially useful for users wishing to re-purpose content. In some re-purposing applications, it may be more important to access the original material rather than a finished production.

3.7. *How does AAF relate to streaming media formats?*

AAF is an authoring format and is not intended for content streaming. AAF content can be published in any of the common streaming media formats. AAF functions equally well with professional and broadcast formats.

3.8. *How does AAF relate to OMFI?*

AAF builds substantially upon the original capabilities of OMFI.

3.9. *Will there be OMFI/AAF conversion tools?*

Yes, bi-directional conversion tools will be available.

3.10. *What are the components of AAF?*

- The NEW AAF Edit Protocol
- The AAF Object Specification, which defines the way AAF stores metadata and essence
- The AAF API Specification, which defines how software engineers can write applications
- The AAF Reference Implementation, which implements both these specifications in a completely cross-platform manner
- The AAF Software Development Kit (SDK), which includes developer utilities and validation test suites
- The AAF Example software which demonstrates how to use the AAF SDK to produce AAF files
- The AAF Example files created by working AAF implementations

3.11. *How will the next version of the specification be developed?*

Technical development of AAF is under the control of the Engineering Committee. Work plans are developed based upon the interests and input of AAF members. Communication regarding development of AAF occurs at AAF technical meetings and over the AAF Source Forge project reflector at www.sourceforge.net/projects/aaf.

4. 3. The AAF Software Development Kit

4.1. *Where can I get a copy of the SDK?*

A copy of the SDK is available on the AAF Web site at the SDK download page.

4.2. *Who owns the AAF SDK?*

The AAF Association controls the AAF SDK. About 95% of the code in the SDK was contributed by Avid, and is licensed under the AAF Public Source license. This license allows users to 1) use the software for free forever, 2) allows users to modify the source code, 3) allows users do charge others for their modified source code, 4) provides a patent pool for copyright protection. Structured Storage, the persistent storage mechanism for AAF is contributed by Microsoft. The Structured Storage Specification is available under the AAF Promoters' Agreement.

4.3. *What is contained in the SDK?*

The AAF reference implementation, including source code and examples of the majority of the Utilities. The SDK includes installers for Windows(R), Irix and MacOS(R) platforms. The SDK includes an AAF file dumper, a sample XML definition of AAF among other things.

4.4. *What are the licensing terms for the AAF SDK?*

The AAF SDK is licensed under a perpetual, royalty-free license. Users are allowed to download source code, make derivative works, include these works in their products and charge for these works.

4.5. *Who would benefit from using the SDK?*

- Developers of software applications for production and editing – to jump-start development
- Developers of video servers and production systems – as a test tool
- End user engineers – as a test and QA tool
- Content creators, catalogers and archivists – to build format-independent content databases

4.6. *Why is the AAF Association producing an SDK?*

We want to ensure that different implementations of the AAF specification are interoperable. Paper specifications are not enough for this kind of technology. Developers need a reference implementation against which they can test and verify their own code.

4.7. *What is the current state of the SDK?*

Please see our download section for the latest compiled versions of the SDK. The latest code from the CVS library is available at <http://aaf.sourceforge.net/>

4.8. What sort of support is available for the SDK?

- AAF members provide support through the Source Forge forum at www.sourceforge.net/projects/aaf
- Product manufacturers provide first-line support to end users of the SDK.
- Members of the AAF Association support each other through shared knowledge databases and email.
- Non-members may purchase support; the proceeds go into the general fund of the Association.

4.9. If I can get the AAF SDK free, why do I need to join the AAF Association?

You should join the AAF Association to get support for the SDK and to participate in the development of future capabilities of AAF. AAF is fundamentally a shared industry initiative, built out of the contributions of its members. No one is required to join; the association is open to everyone. Members share benefits such as access to the support network and participation in developer conferences and the technical committee. You may also choose to join the Association to gain access to Example code, sample files, and access to or a listing on the AAF Developers Resource page.

4.10. What platforms are supported by the SDK?

Windows 98, Windows NT and Windows 2000, Macintosh (System 8.x onwards), and (from DR3), various UNIX flavors including IRIX (V6.5 and later) and Linux.

4.11. What do I have to have in order to run the SDK?

A Windows(R) , Macintosh(R) (or from DR3, UNIX) computer of at least the performance indicated in the AAF SDK Release Notes, and a C++ development environment.

4.12. How much work has gone into the SDK?

Across all AAF Association Founders, the size of the engineering team is presently more than 15 people. The development effort is estimated at over \$3 million dollars.

4.13. Who wrote the current SDK?

The SDK was developed by Avid Technology Inc., with the assistance of Microsoft, Sony, Discreet and the BBC.

4.14. Can I make products using the SDK?

Yes

4.15. Can I charge money for products using the SDK?

Yes

4.16. Under what conditions do I have to pay for the SDK?

None

4.17. Can I download the SDK "just to take a look?"

Yes

4.18. Are there documents that support the SDK?

Yes, documentation for the SDK is available.

4.19. How do new changes get incorporated into the SDK?

Changes and additions to the SDK are submitted to the Head of Engineering. Development work is then done through an Open Source process with checks and balances and testing defined by the Engineering Committee of the AAF Association. No change is made to the SDK without a Specification Update, a Regression Test, and proven cross-platform performance.

5. History behind AAF and the Association

5.1. Who were the AAF Promoters?

The AAF Promoters were the original developers and supporters of the Advanced Authoring Format. It was felt from the beginning that a formal organization would be needed to move the objectives of the original group forward. The AAF Association was created to help achieve this goal.

5.2. How does the AAF Association relate to the AAF Promoters?

The AAF Promoters were the original participants in the AAF before the association was incorporated. The AAF Association was created to promote the Advanced Authoring Format.

5.3. What happened to the AAF Promoters? Why did the Promoters decide to form the AAF Association?

The Promoters decided to form the AAF Association as the next stage in the AAF's evolution. The Promoters long-term goal, through the Multimedia Task Force, was to establish AAF as a file interchange standard with broad industry support. Having reached the milestone of completing Version 1.0 of the spec, SDK and Reference Implementation, the Promoters recognized that the formation of the AAF Association was the best way to achieve this long-term goal. The Promoters also felt that having independent leadership of the organization in a non-profit corporation would be critical to the success of AAF.

We expect that the original Promoters will continue to be active on behalf of AAF both within the AAF Association and in the international standards arena.