RECOMMENDATION FOR THE MAINTENANCE OF THE *UNIFIED CAD FUNCTIONAL REQUIREMENTS* DOCUMENT

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Cover Photo Credit

- *Photographer*: Joel Klein
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INTRODUCTION

This paper provides a recommendation for the methodology to maintain the *Unified CAD Functional Requirements* document, published by the IJIS Institute and the Association of Public Safety Communications Officials International (APCO) in 2012.

In response to the issues identified in the *Revision Assessment for the Law Enforcement Computer Aided Dispatch* (*CAD*) *Functional Specifications* document, the IJIS Institute and APCO, on behalf of the Bureau of Justice Assistance (BJA), launched the Unified CAD (UCAD) Project in 2010. The UCAD Project was formed, in part, to create the *Unified CAD Functional Requirements* (*UCADFR*) document – a detailed, comprehensive and unified set of functional requirements for CAD systems. The *UCADFR* is an invaluable resource to the law enforcement, fire services, emergency medical services, communications, and industry communities by supporting the planning, acquisition and management of full-featured CAD software applications. The *UCADFR* identifies and describes over 130 CAD functions in 11 different topic areas and provides information on future issues for CAD systems, such as Next Generation 9-1-1 and Broadband/LTE.

Given that CAD systems are enhanced over time with functional modifications or additions, and the importance that the document has to the stakeholder communities, the *UCADFR* document is expected to need periodic revision; therefore, as a deliverable of the UCAD Project, **the UCAD Project Committee recommends that the Unified CAD Functional Requirements document (UCADFR) be made an APCO standard and maintained via the APCO ANS Process.**

The outcome of moving the *UCADFR* forward through the APCO ANS process and having APCO assume ownership of the *UCADFR* will enable APCO to assume the on-going maintenance role. Further, the approval of the *UCADFR* as an American National Standard (ANS) will provide a greater likelihood that the *UCADFR* will be utilized by the public safety community and the Computer-Aided Dispatch industry alike. The reasoning for this recommendation follows.

OVERVIEW OF THE APCO INTERNATIONAL ANS PROCESS

APCO partners with many organizations advocating mutual public safety interests to develop standards that advance and benefit public safety. Collaborative efforts provide opportunities to address all interests, ensuring the most effective results. APCO is an American National Standards Institute (ANSI) Accredited Standards Developer (ASD) and must comply with the ANSI requirements for standards development. These requirements provide standards developers with a neutral venue for benchmarking their standards development process. The American National Standards (ANS) process requires that access to the standards process has been made available to anyone directly or materially affected by the activity under development. Periodic reviews of the standard are scheduled to ensure that the standard is a "living" document. ANSI's approval of these standards further verifies that consensus has been achieved.
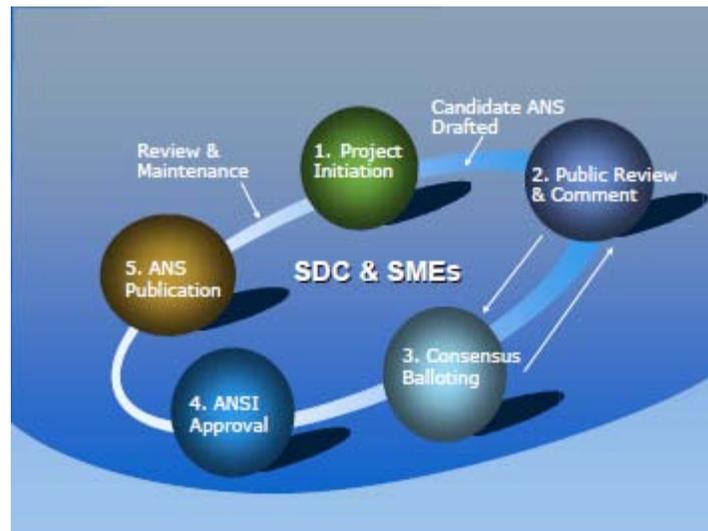
Consensus signifies the concurrence of more than a simple majority, but not necessarily unanimity. ANSI promotes three additional "cardinal principles" that further support the consensus process: due process, openness and balance.

1. *Due process* means that any person may participate by expressing a position and its basis, having that position considered, and appealing if adversely affected. This is done through the public review and comment period. Appeals only pertain to issues regarding the process itself, not the content. Due process allows for equity and fair play.

2. *Openness* is defined as any materially affected and interested party has the opportunity to participate in the consensus process. APCO cannot require consensus body members to be APCO members.

3. The standards development activity should have a *balance* of interests and shall not be dominated by any single interest category. APCO has three interest categories within each consensus body: users, producers, and general interests. These representatives are from all regions and different organizations. If a balance does not exist, APCO will actively solicit members to create a balance.

The APCO ANS process can take anywhere from 4-18 months, depending on the content of the standard. APCO uses the latest technology to help the process be as efficient and effective as possible, which is extremely important with how quickly public safety communications is evolving. The APCO ANS Process consists of four major steps:

1. Project Initiation,
2. Public Review & Comment Period,
3. Consensus Balloting, and
4. Review.

Figure 1. ANS Process

One of the initial steps is to publish the project initiation information within ANSI's Standards Action. This notifies other ASDs that the project is in development with a description of the standard, as well as an explanation of the need for the standard. Once this is published, ASDs have the obligation to contact APCO if there is an existing standard that duplicates or conflicts with this project. If one exists, we must move forward with harmonization activities or withdrawal the standard. This process allows for the

document to become a candidate American National Standard, which, once approved, cannot be duplicated by other ASDs.

The next step in the process is the 45-day public review and comment period. At this time, any materially affected and interested party may review the document and submit comments on the candidate ANS. The preliminary document is made available for downloading on APCO's website, which provides information regarding the type of comments that can be submitted and how to submit them. When comments are received, they will be sent to the workgroup or committee consisting of the Subject Matter Experts (SMEs) that developed the content of the candidate ANS for review and recommendations on how to respond to the comments (addition, modification, deletion, and/or no action).

APCO's Standards Development Committee (SDC) has been instrumental in helping to develop standards and promote change in the field of public safety communications. The policy guiding the formation of Committees and participant responsibilities can be found in APCO's Policy Manual Section VII. Applications are for the next fiscal year and are accepted through April 1 of the current year. All APCO members are encouraged to join a committee, and can apply online or by calling APCO headquarters. The Committee Group Leaders are Board appointed. These group leaders put together their committees from the committee applications received. Each committee is assigned a staff liaison.
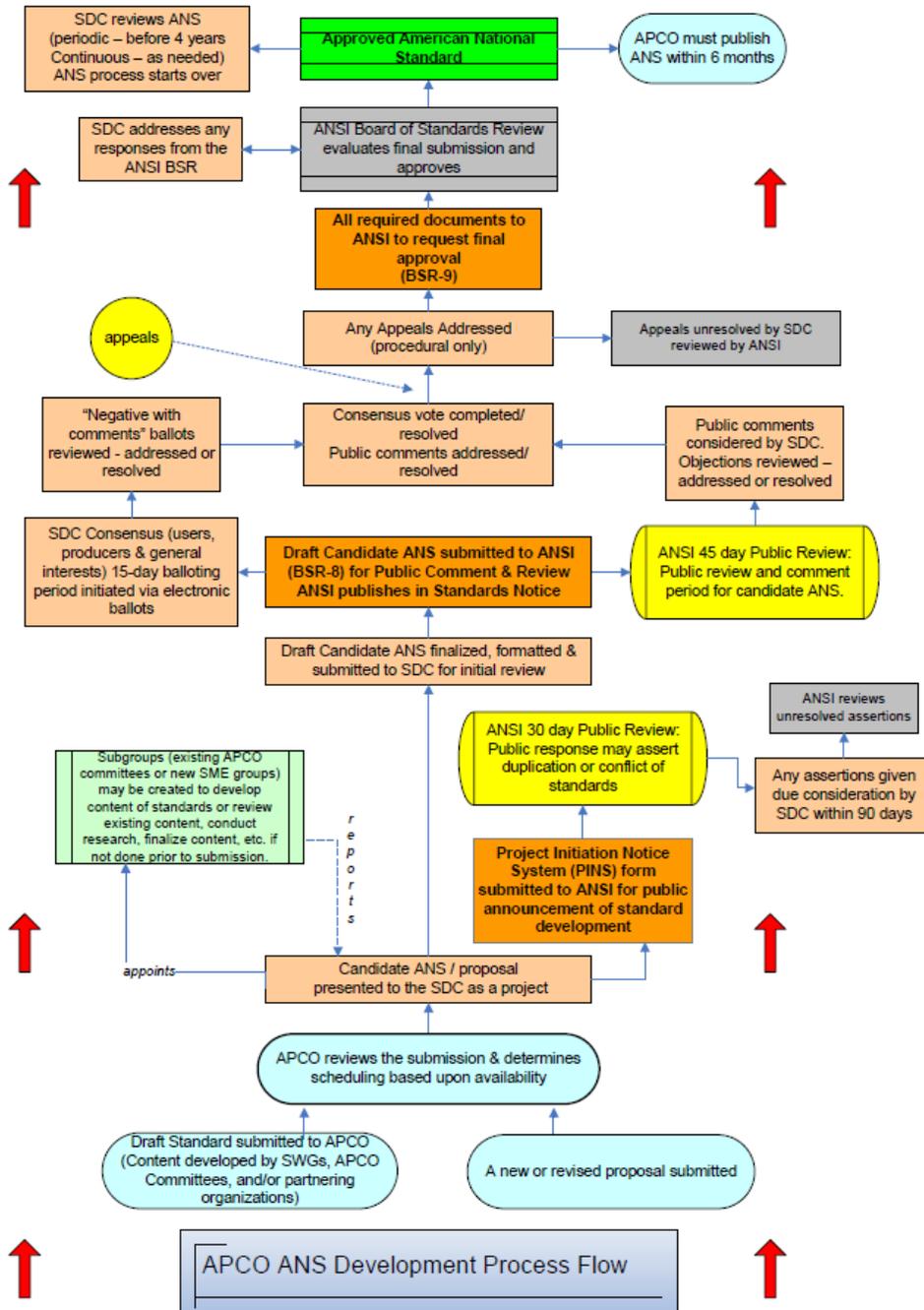
The SDC oversees the standards development process with support from APCO staff. APCO's Standards Development Committee (SDC) will respond to the commenter based on the recommendations. The SDC is comprised of a diverse group of practitioners who represent various public safety communications services throughout the nation. The SDC facilitates the APCO ANS process, working closely with the subject matter experts who develop the content, and are representative of the stakeholder communities. The SDC is obligated to only respond to relevant comments and those that provide potential solutions if they include a problem within the comment. If the SMEs believe a substantive change is needed resulting from a comment, the change will be made to the document and will be subject to an additional 30- or 45-day public review and comment period. For the purposes of the this recommendation and the APCO ANS process, members of the UCAD project committee are considered to be the initial SME group (see UCADFR-Specific Parameters in the next section that further defines the on-going role of the SME group and how the group will be maintained).

Depending on the candidate ANS and the comments received, the consensus body will start its 15-day electronic balloting period typically during the last 15 days of the public review and comment period. If any negative votes are received, then a relative comment and potential solution must be included. Once the balloting period has ended, and if consensus was reached, the candidate ANS is submitted to ANSI's Board of Standards Review for final approval. When approval is received from ANSI, the document receives the finalized ANS designation with the approval year—an example would be "APCO ANS 3.102.1-2008."

APCO ANS Policies and Procedures require every ANS to be reviewed no later than four years for either reaffirmation, withdrawal or revisions. The APCO ANS process would begin again at that time. The ANS can be revised any time before that, if needed, keeping the standard relevant. Depending on what is decided during the development stages, a standard can be under continuous maintenance or periodic maintenance. With continuous maintenance, comments are accepted all the time; and, if comments are received that result in revisions or if the committee decides a revision is needed, then only the revision will go through the APCO ANS process and a project initiation notice is not needed.

There is an appeal mechanism through ANSI, but it is only applicable for issues regarding the ANS process, not the content of the candidate ANS. The approved ANS must be published within six months of receiving approval from ANSI. APCO ANS are published on the APCO website for complimentary downloading. For more information regarding the APCO ANS Process, APCO Standards Development Committee, and/or APCO standards activities, please visit www.apcostandards.org or email standards@apco911.org.

Figure 2. Detailed ANS Process

UCADFR-SPECIFIC PARAMETERS

Several specific parameters within the APCO ANS Process are assumed in relation to a *UCADFR* Standard (these have been agreed to by APCO):

1. The standard review period will be quarterly, unless no comments are received. In the future, the review cycle may be lengthened.

2. Given the *UCADFR*'s importance to the emergency communications community, APCO will absorb the costs of future reviews.

3. The UCAD Project committee will serve as the initial SME Review Committee but with an understanding that, over time, members will need to be replaced for various reasons (*e.g.* retirement, time constraints, etc.). In the situation of an SME needing a replacement, SMEs from the same discipline will be selected (*i.e.* if an "emergency communications person" leaves, then an "emergency communications person" will be selected as the replacement).

4. Initially, and in the future, the SME Review Committee shall be representative of the emergency communications, law enforcement, fire service, emergency medical services, and industry communities. BJA, the IJIS Institute and APCO will be the primary points of contact for APCO regarding the administration of the *UCADFR* Standard's SME Review Committee.

RECOMMENDATION

- Given the importance of the *UCADFR* document to the stakeholder communities of emergency communications, law enforcement, fire service, emergency medical service, and industry; and,

- Given the importance of keeping the *UCADFR* up to date and maintained as a valuable resource for the stakeholder communities (*i.e.* a "living document"); and,

- Given that the APCO ANS Process performs a periodic public review and update of the standards; and,

- Given that the APCO ANS Process utilizes a committee of SMEs, who are representative of the stakeholder communities, to review the public comments and to decide on the appropriate response:

> **The UCAD Project Committee hereby recommends that the *Unified CAD Functional Requirements* document be made a standard and maintained via the APCO ANS Process.**

ABOUT APCO INTERNATIONAL

The Association of Public-Safety Communications Officials (APCO) International is the world's oldest and largest professional organization dedicated to the enhancement of public safety communications. APCO International serves the professional needs of its 15,000 members worldwide by creating a platform for setting professional standards, addressing professional issues and providing education, products and services for people who manage, operate, maintain and supply the communications systems used by police, fire and emergency medical dispatch agencies throughout the world.

ABOUT THE IJIS INSTITUTE

The IJIS Institute unites the private and public sectors to improve critical information sharing for those who provide public safety and administer justice in our communities. The IJIS Institute provides training, technology assistance, national scope issue management, and program management services to help government fully realize the power of information sharing.

Founded in 2001 as a 501(c)(3) nonprofit corporation with national headquarters on The George Washington University Virginia Science and Technology Campus in Ashburn, Virginia, the IJIS Institute has grown to nearly 200 member and affiliate companies across the United States.

The IJIS Institute does its valuable work through the contributions of its member companies. The IJIS Institute thanks the Emerging Technologies Advisory Committee for their work on this document.

The IJIS Institute also thanks the many companies who have joined as members that contribute to the work of the Institute and share in the commitment to improving justice, public safety, and homeland security information sharing.

LINKS TO MORE INFORMATION

APCO International
http://www.apcointl.org/

The IJIS Institute
http://www.ijis.org