Coordinating Committee on International Software Communications Architecture (SCA) Standards

Charter and Working Policy

Version 3.0.0

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Preface

Under the Wireless Innovation Forum (SDR Forum version 2.0) 2010 to 2014 Strategic Plan, the SCA Work Group was promoted to Committee status, acting as one of several Technical Committees within the Forum.[1] Given the advanced state of commercialization of the SCA and related technologies, the resulting "Coordinating Committee on International Software Communications Architecture (SCA) Standards" was given special status within the organization to grant member organizations interested in advancing those technologies additional autonomy in the commercialization process.

This document specifies the charter, structure, policies and procedures for this new Committee, including defining the procedures that will be used in governance of the committee and in the development of Reports, Recommendations and Specifications by the Committee's various work groups.

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[1] "2010 to 2014 Strategic Plan" approved 3 December 2009, available at www.wirelessinnovation.org

Coordinating Committee on International Software Communications Architecture (SCA) Standards:

Charter and Working Policies

1   Introduction

The Coordinating Committee on International Software Communications Architecture Standards (CC SCA) is a Technical Committee of the Wireless Innovation Forum created to oversee the evolution and adoption, at the international level, of SCA standards for the development of software defined radios. This suite of SCA standards is developed to facilitate portability, interoperability and configurability of the software and hardware components used in the manufacturing of radio systems. It is foreseen that an eco-system of off-the-shelf software and hardware components will be developed from which manufacturers could choose to build their radios. Time-to-market may be reduced as well as development cost.

The various standards that are being considered at this time for development by this Committee include:

- **SCA Base Specification** – This defines a set of rules and guiding principles for the deployment, management, interconnection, and intercommunication of software components in embedded, distributed-computing communication systems. The Wireless Innovation Forum has adopted,[2] as the baseline standard for the SCA Core Framework, the US Department of Defense (DoD) Joint Tactical Radio System (JTRS) Software Communications Architecture v2.2.2. The document will be reviewed and modifications will be made to facilitate the development of SCA compliant products and improve the performance of the radios. The Forum has agreed that as much as possible, backward compatibility will be maintained to protect prior investments.

    In September 2009 the Forum accepted the offer of the US DoD JTRS to work on the evolution of the SCA v2.2.2 and act as the public liaison organization for the promotion of the standard. As such, the Forum will work on a number of modifications proposed by the JTRS program office.

- **SCA Application Programming Interfaces (APIs)** – In this standard, the Forum will develop a set of standard interfaces, compatible with the SCA Base certification, enabling the radio components to cooperate using a common set of instructions. The APIs developed will, whenever possible, be compatible with already published APIs from the

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[2] SDRF-08-R-0006-V0.3.0 dated 19 June 2008

US DoD JTRS program. Other APIs developed within the Forum but not compatible with the SCA Base specification will be considered.

- **SCA Test and Certification** - In this standard, the Forum will develop a set of guiding principles to follow when testing SCA platforms and communications protocols (aka waveforms) to ensure certain levels of compliancy in the software and hardware components developed. This will facilitate interoperability and portability of the components.

2   Hierarchy

The latest version of several documents takes precedence over the policies and procedures defined in this charter in the following order:

Document Name	Policy Number	Date Adopted
Bylaws		29 October 2008
Document Approval Process	001	27 January 2009
Project Approval Committee Procedures	002	1 February 2008
Partner Organization Document Sharing Policy	003	22 February 2008
Member Rights, Privileges and Preferences Policy	004	23 March 2008
Intellectual Property Rights Policy	007	26 September 2008
Policy on Restricted or Controlled Information	009	25 November 2008
Participation by Non-Members Policy	014	10 March 2009
2010 to 2014 Strategic Plan		3 December 2009

Robert's Rules of Order (Revised) is the recommended guide on questions of parliamentary procedure not addressed in these procedures.

3   Mandate

The Forum recognizes that the different stakeholders may have differing needs in developing extensions or variations of SCA Standards for their specific usage and agrees that the Standards will be a combination of the following three categories:[3]

1. Areas of open standards with unlimited public access, which are managed in the best interest of all stakeholders (U.S. DoD, EDA, radio providers, waveform applications developers and others) by an independent international organization like the Wireless Innovation Forum.

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[3] "Support for Three Category Approach for Software Communications Architecture Standards and Extensions", Forum Document Number WINNF-09-R-0023-V1.0.0 available at www.wirelessinnovation.org

2. Areas of limited distribution for sensitive multi-national needs, such as for coalition interoperability, which are managed by a relevant multi-national body such as NATO or EDA.

3. Areas of highly restricted access for specific national and sovereign interests which are managed by national bodies.

The mandate of the CC SCA is to support the harmonization of the SCA standards in the first category at the international level for the mutual benefits of all stakeholders to include:

- Defining an industry driven SCA evolution roadmap for the international community
- Profiling the SCA specification and related APIs to define internationally accepted variants that are hosted by the Forum
- Developing extensions to the SCA standards that address any gaps between the defined SCA evolution roadmap and Forum accepted SCA specification variants
- Providing implementation and certification guides, tools etc. easing implementation and supporting proliferation
- Establishing and managing industry led certification programs where appropriate

The Forum will limit its activities to the development and support of standards that can be made openly available to public. In doing so, the Forum will follow established policies on intellectual property and controlled information.

4   Committee Structure

The CC SCA will be composed of a number of Work Groups and managed by a Steering Group. The Committee will be member driven with general participation in the CC SCA open to any member organization as per existing policy.[4] As with all working committees of the Forum, the CC SCA will report to the Forum Chair.[5] The Forum's Technical Director shall be an ex-officio member of the Committee's Steering Group, and shall represent the CC SCA on the Forum's Board of Directors.[6] An Advisory Council will also be formed by the CC SCA to advise the Steering Group on user requirements. The next Figure shows graphically the reporting structure of the Committee.

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[4] Forum Policy 004
[5] Sections 8.3 and 7.7.2 of the Forum's Bylaws as amended on 3 December 2009
[6] See section 7.3 of the 2010 to 2014 Strategic Plan

Coordinating Committee on International SCA Standards
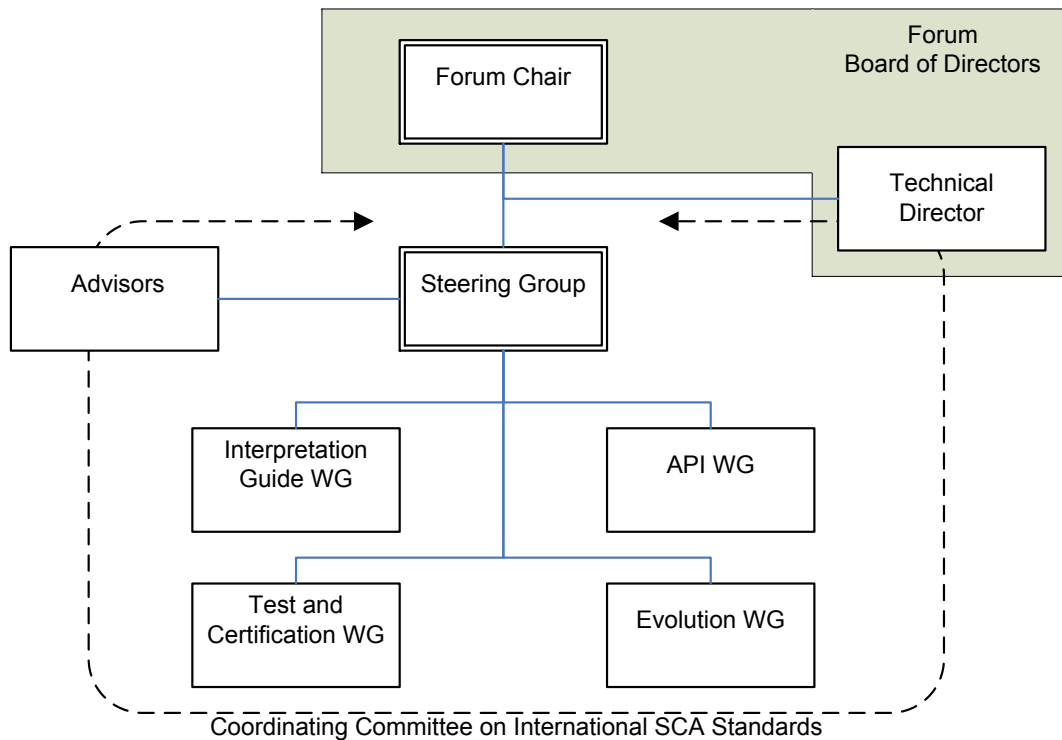
4.1 Steering Group

The Steering Group of the CC SCA shall have the responsibility for coordinating the different activities within the CC SCA and ensuring that liaisons with the stakeholders and the Forum's Chair and Technical Director are maintained.

Members participating in this Steering Group will have the ability to
- Influence the direction of the SCA evolution by collaborating with the Advisory Council for the mutual benefits of the industry and stakeholders;
- Improve alignment of company products and industry roadmap with the SCA evolution;
- Define and approve the special activities to be funded by the Committee budget.

The responsibilities of the Steering Group shall include:
- Interfacing with external stakeholders, in particular the Advisory Council, as appropriate, to grow the influence of SCA standards and of the WINNF and approving any communications out of the Committee;
- Defining, approving, publishing and maintaining roadmaps describing the evolution of SCA standards;
- Acting as the Project Approval Committee for the CC SCA, approving the activities proposed by the Working Groups[7];

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[7] In accordance with Forum Policy 002

- Managing the discretionary budget of the CC SCA and approving funding of special activities that would support the mandate of the Committee. This could include, if appropriate, working with Forum staff to contract out activities such as technical writing or reference implementations;
- Coordinating and monitoring the progress of the CC SCA Work Groups in accordance with the Approved Project and in compliance of the Work Groups with committee policies and procedures and recommending realignment if required;
- Overseeing the election process of the Work Group Chairs;
- Supporting the Forum's Document Approval Process, including acceptance of documents for committee ballot, coordination of document balloting at the committee level, and promotion of documents to the Forum Chair for Plenary level ballot[8].

The Steering Group is responsible to the Forum Chair in the development of work products, following the Forum's approved document process and as identified in the Forum's annual operations plan.

The Steering Group shall report to the Forum Chair and the Technical Director new projects as they are approved.

The Steering Group shall support the Technical Director in carrying out the mandates of the Board, establishing the Forum's overall technical roadmap, coordinating with other Technical Committee Chairs on projects of mutual interest, and establishing the annual technical operations plan and budget. Technical Director shall have approval authority for the CC SCA annual operations plan prior to it being submitted to the Forum Chair and the Board of Directors and shall report to the Board on execution against that plan on a quarterly basis.

4.1.1   Membership and Fees

Membership in the Steering Group shall be open to any Forum member organization that pays a designated enhanced membership fee. This fee shall be established by the Wireless Innovation Forum Board of Directors on an annual basis, and will be billed during the membership renewal cycle. Initial membership for most steering group participants will be out of cycle, and as such those members wishing to participate in the steering group in advance of their renewal date will be required to submit a letter of intent to pay the enhanced fee during the next billing cycle to the Forum.

Membership on the Steering Group shall be limited to no more than one member representative per paid organization. The Technical Director of the Forum shall be an ex officio member of the Steering Group and shall participate in the Steering Group without an enhanced membership fee.

4.1.2   Voting rights

Each Steering Group member representative shall have one vote in the Steering Group.

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[8] Control Points 5 and 6 of the Forum's Document Approval Policy (Policy 001)

The Steering Group will approve, by majority vote, issues related to the following topics:
- Correspondence with external stakeholders and press releases
- Committee roadmap
- Working Group projects through the Project Approval mechanism
- Spending of funds

4.1.3   Steering Group Executive Board

The Steering Group shall be led by an Executive Board with specific responsibilities including the following:

- Leading Steering Group meetings and recording of Steering Group meeting minutes.

- Reviewing financial status of the Steering Group through the tracking of allocated funds and associated expenditures.

- Identification of pertinent strategies for achievement of Steering Group objectives and planning of corresponding new initiatives.

- Reviewing progress of the CC SCA Working Groups against the SCA roadmap.

- Considering inputs from the Advisory Council an/or other key SCA Committee stakeholders.

- Consideration of other relevant topics.

4.1.3.1 Executive Board Election

Members of the Executive Board shall be elected by the Steering Group from the Steering Group membership. The election shall coincide with the election of the Wireless Innovation Forum Board of Directors.

4.1.3.2 Executive Board Term

The elected members of the Board shall have a one year term and may be elected to an unlimited number of subsequent terms. Should an Executive Board member vacate their position in advance of the end of their term, the Steering Group may choose to hold a special election (byelection) to fill the vacant post.

4.1.3.3 Executive Board Composition

The Executive Board shall be comprised of six elected members. The elected Executive Board members shall be responsible for organizing the structure and operation of the Executive Board in accordance with the following guidance:

- There shall be two separate leadership positions in the form of either Chair and Vice Chair positions or two Co-Chair positions. The purpose of these two positions is to provide leadership for the CC SCA, the Steering Group and Executive Board. The Chair(s) of the Executive Board shall also be responsible for Chairing the Steering Group

and the CC SCA. Consideration should be given to leadership needs and abilities in conjunction with a balance of interests across international regions, user domains or other pertinent dimensions. For the situation of leadership provided by two Co-Chairs, specific tasks shall be allocated and communicated accordingly to ensure that all necessary leadership responsibilities are adequately covered, including:

    a. The Chair(s) report to the Chair of the Forum for day to day operations.

    b. The Chair(s) report to the Technical Director related to interactions with other Technical Committees and the Forum Board of Directors.

    c. The Chair(s) manage the balloting process at the Committee Level.

    d. The Chair(s) oversee the meetings to ensure collaboration and manage contention.

    e. The Chair(s) typically don't vote on Committee matters unless there is a tie vote.

    f. The Chair(s) ensure compliance with Forum directives and follow-up on action items.

- There shall be a Secretary position with the responsibility for maintaining minutes of Steering Group and Executive Board meetings.

- There shall be a Treasurer position for the purpose of tracking expenditure of funds specifically allocated to the Steering Group.

- Two "At Large" positions shall be established. Consideration for these positions should include the notion of balance across international regions. Specific responsibilities should be assigned by the Executive Board as appropriate. Considerations for these responsibilities should include liaison support for members of the Advisory Council, Forum vendors and partner organizations, unique regional interests or user domains.

- The Executive Board leadership (Chair/Vice Chair or Co-Chairs) should employ appropriate leadership approaches to conduct the business of the CC SCA, Steering Group and Executive Board in a fair and timely manner. For the Executive Board this shall include achieving consensus or calling for a majority vote regarding any particular initiative before the Board.

In addition, the Forum Technical Director and CC SCA Work Group chairs shall be *ex officio* members of the Executive Board and may attend Executive Board meetings but shall not be eligible to vote.

4.1.3.4 Executive Board Meetings
The Executive Board will meet at least bi-monthly and may meet independent of the Steering Group, bringing forward recommendations for ballot by the full Steering Group.

4.2 Advisors

Advisors to the CC SCA represent various government stakeholders in the identification of requirements for International SCA Standards and the development of a vision to support their operations. The Advisors may meet on a regular or ad hoc basis by teleconference or face-to-face

with the Steering Group in an Advisory Council. A separate charter shall be established for the Advisors.

4.3   Technical Work Groups

The CC SCA shall have a number of Work Groups (WG) and Task Groups to help perform its mandate. A WG will have long term responsibilities and objectives while a TG will be more *ad hoc* responsibility for a specific project. A Task Group project may support multiple WGs when appropriate. WGs and Task Groups may be created or dissolved as needed, by the Steering Group of the CC SCA.

The initial WGs are:

1. *SCA Evolution Work Group*

    This WG will work with the SCA international stakeholders to evolve the SCA base specification to facilitate the development of radios and increase their performance.

2. *SCA Interpretation Guide Work Group*

    This WG will review the SCA base specification and will ensure that a common understanding of the clauses within the standard can be obtained. The output of this WG will feed into the Test and Evaluation WG

3. *SCA Application Programming Interface (API) Working group*

    This WG will develop and standardize APIs that could be used internationally to facilitate software and hardware portability.

4. *SCA Test, Evaluation and Certification (T&E) Working group*

    This WG will develop a process by which SCA based radios can be tested and certified.

4.3.1   Work Group Membership

Membership in a CC SCA Work Group or Task Group is open to any representative of a Forum member organization interested in the mission of the group. Those wishing to actively participate as members must request access from the WG Chair through the Forum's portal. All WG members may participate in the WG's meetings, in discussions and in Task Group activities.

Participation by non-members in CC SCA Work Groups and Task Groups shall be limited as defined in Forum Policy 014.

4.3.2   Work Group Chair and Vice-Chair

The WG will be lead by a Chair, assisted by a Vice-chair.

4.3.2.1 WG Chair Election

WG chair and vice-chair are nominated by the Steering Group from qualified and eligible member representatives for confirmation vote by the CC SCA members. WG chairs need not belong to organizations that have paid enhanced membership fees.

Member representatives nominated by the Steering Group must accept the nomination prior to the vote proceeding. Voting shall be by email ballot, following the standard committee balloting process. The ballot options shall be "approve" or "disapprove" only, and the WG chair shall be confirmed is he or she receives approval from a majority of those who vote. If a nominee is rejected by the membership, the Steering Group shall submit a second nomination and repeat the vote until a WG chair is confirmed.

The WG chairs serve a one year term and shall be reconfirmed on an annual basis.

4.3.2.2 WG Chair Responsibilities

The WG Chair shall coordinate the work of its WG. Duties of the Chair include:

- Chairing the working sessions during the Forum working meetings, ad-hoc meetings and conference call (telephones, webinar…), including taking minutes and maintaining attendance records of each meeting to determine voter eligibility
- Providing progress reports to the Chair of the Steering Group so that a presentation may be given at the closing plenary of the Forum working meetings
- Overseeing the generation of the WG reports, recommendation and specifications
- Preparing documentation required for the approval process
- Managing Work Group Ballot and promoting documents to the steering group for Committee ballot
- Maintaining an active presence on the Forum portal by posting any relevant information for its members

The Vice-chair will assist the WG Chair and will have the same responsibilities if delegated by the WG chair or if the WG Chair is absent during a Forum working session. A secretary may also be appointed to maintain minutes and attendance records at the Chairs discretion.

5 Work Group Policies and Procedures

The following defines the baseline policies and procedures that will be followed by work groups in execution of their operations plan. These policies and procedures may be amended or modified as appropriate by each WG, but such changes must be approved by the WG members and the Steering Group.

5.1 Work Group Meetings

5.1.1 Face to Face Meetings

Face to face meetings of WG members shall coincide with the Forum's regular General Meetings. It is the responsibility of the CC SCA Chair to coordinate with the Forum Technical Director to define the session schedule and reserve the rooms and timeslots for meetings.

The WG chairs may organize *ad hoc f*ace-to-face meetings to further advance the discussion and report as required. Such meetings shall be announced at least 40 days in advance. The announcement shall indicate the location of meeting, time of the meeting (start and closing), and an agenda describing the topics to be discussed.

5.1.2 Teleconferences and Web Conferences

WG chairs may organize special meetings in the form of conference calls and web conferences. In normal circumstances, these conference calls would be using Forum teleconference and web conference facilities. The WG Chair is responsible to announce such meetings to the WG members. The announcement of these meetings shall be sent to members at least 6 days prior to the events. The request shall indicate the time of the meeting (including time zone), information on accessing the conference facilities, and an agenda describing the topics to be discussed.

5.2 Voting

Voting on all internal matters at the working group level is open to all eligible WG members. When an organization has more than one representative on the WG, only one vote may be cast for each organization.

Voting on documents shall allow for a "Last Call" of at least 2 weeks permitting work group member representatives to coordinate their ballot response within their organizations.

Voting may occur at meetings of the WG or by email depending on the document or issue being voted on (see details below). Where voting occurs at a meeting, each organization with one or more members present shall indicate which member will cast its vote. Each organization when joining the WG shall designate to the WG Chair, which of its member shall cast its email vote by email. This designation can be changed prior to any vote.

The chair of the WG shall announce the title, short description and access location of any work product at least 2 weeks before the announced close of voting. This announcement shall be sent to all registered members of the WG.

5.2.1 Voting by Mail

When voting by email, votes may be:

1. disapprove with major comment

2. approve

3. approve with minor comment

4. abstain

5. abstain with comment

Approval shall be by majority (greater than 50%) of the organizations casting votes by the announced deadline.

Approve with minor comment may specify minor issues that the voter's approval is conditioned upon. Reject with comment may specify major issues that are the reason for the rejection.

If the matter receives a majority of approval (without comment) votes then the vote succeeds. At the discretion of the WG chair, the minor comments may be considered and if the chair considers that they are minor and may be addressed without significant change then the matter is approved with the changes.

If a majority requires the inclusion of the approval with minor comment votes, then the comments must be considered and if in the opinion of the chair they are minor and may be addressed without significant impact then the matter is approved with the changes.

However, even if a majority is reached as above, if there are votes of reject with major comment the chair must consider those comments and if in the opinion of the chair and the vice chair the comments are significant and valid, the matter is rejected and the comments must be addressed and matter re-balloted.

In all cases, the Chair of the Steering Group must be made aware of the Ballot Results.

5.2.2   Voting at a Meeting

When voting at a meeting, votes may be:

1. reject

2. approve

3. abstain

If a majority votes (greater than 50%) of the member organizations present, is to approve then the matter is approved. Any major or minor comments should be made during the discussion period prior to the vote.

5.2.3   Participation Requirement

Voting at the WG level on any work product shall be restricted to those organizations that participated in the development of the work product. Only member organizations that have

participated in two or more of the last five teleconferences or other meetings prior to the call for vote may cast a vote on the approval of the work product.