

WinnForum Members in the SCA Ecosystem

Radio / Application Providers

A4ESSOR
Bharat Electronics
Harris
Hitachi Kokusai Electric
Indra
Larsen & Toubro
NEC
Qinetiq
RadmorSA
Rafael
Raytheon
Rockwell Collins
Rohde & Schwarz
Rolta
Selex ES
Tata Power SED
Tata Consultancy Services
Thales



Others

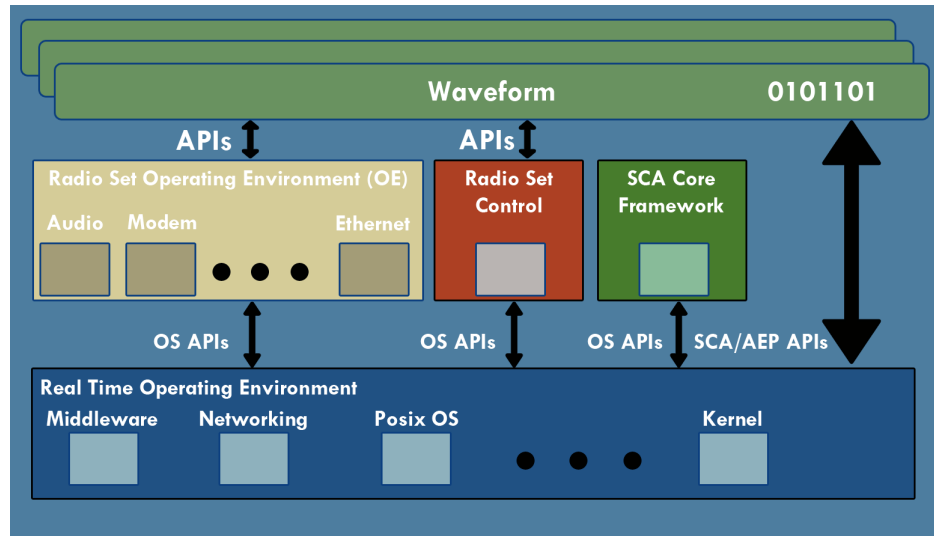
Aeroflex
Communications Research Centre (CRC)
DataSoft Corporation
Datron World Communications Inc.
FMV
Fraunhofer
MITRE Corp
NCOIC
Nordiasoft
Objective Interface Systems
OMG
Optimum Semiconductor Technologies, Inc.
Reservoir Labs
PrismTech
Spectrum Signal Processing By Vecima
Virginia Tech

Government Agencies

AFRL
CERDEC
DGA
DSO
National Labs
FMV
SPAWAR



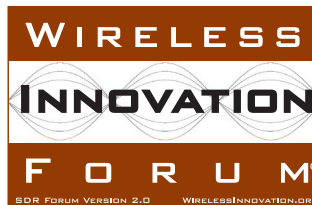
SCA Creation and Management Hierarchy



Source: JTNC

From SCA 2.2.2 to SCA 4.1

The Forum's Coordinating Committee on International SCA Standards has been working in coordination with the Joint Tactical Networking Center (JTNC) on the elaboration of the SCA 4.1.



SCA 4.1 Standard features highlights:

- Increased addressable SDR Platforms
- ◊ Utilization of profiles for scalability and SWAP improvements
- Performance enhancements
- ◊ Improved boot and WF start times
- Increased Information Assurance
- Reduction in the development lifecycle cost
- ◊ Increased testability, improved portability
- Protection of the SCA 2.2.2 Waveform Application Investment resulting from Backwards Compatibility features

SCA 4.1 includes real benefits to the radio vendor, the complete SDR ecosystem and eases the Waveform Portability making SCA 4.1 an enabler for better radios and beneficial to warfighters.

About the Wireless Innovation Forum Coordinating Committee on International SCA Standards

Do you want to be part of the SCA Ecosystem? Get involved in the Forum's SCA Committee today:

- Define an industry driven SCA Standards evolution roadmap for the international community
- Profile the SCA specification and related APIs to define internationally accepted variants that are hosted by the Forum
- Develop extensions to the SCA standards that address any gaps between the defined SCA evolution roadmap and Forum accepted SCA specification variants
- Provide implementation and certification guides, tools etc. easing implementation and supporting proliferation
- Facilitate industry led certification programs where appropriate

Do you want to be part of the SCA Ecosystem? Get involved in the Forum's SCA Committee today. To learn more, contact: Lee Pucker, CEO, Lee.Pucker@WirelessInnovation.org.

SCA Standards for Defense Communications

Global Adoption, Proven Performance

- More than 400,000 platforms in service with SCA capabilities
- Near 40 Waveforms developed and ported in U.S. and International Market
- More than 40 Platforms identified in U.S. and International markets
- 15 international vendors proposing , developing and deploying SDR platform's incorporating SCA capabilities to support Multi-Waveforms

What are SCA Standards?

Standards based on or supporting the Software Communications Architecture (SCA), an architecture framework created to assist in the development of software defined radio communication systems, allowing waveform application software to be more easily ported across radio platforms.*

SCA Benefits

- **Proven cost and delivery time advantages** through the reuse of waveform software and firmware components within a radio family and across radio vendors
- **Enhanced communications interoperability** through use of a common waveform application base across multinational coalitions
- **Simplified insertion of new communications capabilities in deployed radios** including next generation networking, dynamic spectrum allocation and multinational security solutions
- **Reduced development risk and time-to-market** through an established SCA vendor ecosystem

*For more information on the history of the SCA visit: wirelessinnovation.org/What_is_the_SCA



"SCA Standards are key success factors for reducing cost in porting common waveforms onto platforms from different suppliers and bringing benefits to radio manufacturers in advancing their product portfolio such as reduced time to market, reduced development costs, and the availability of ported waveforms, therefore providing more options to customers."

David Renaudeau, Thales

Wireless Innovation Forum Coordinated SCA Based Standards Portfolio:

WirelessInnovation.org/SCA_Standards

WirelessInnovation.org

"We have realized significant savings by leveraging SCA standards across Harris' military tactical Software Defined Radio (SDR) product lines. The underlying component technology facilitates genuine software reuse, providing development cost and time savings for porting simple legacy waveform applications to porting highly complex networking waveform applications."

Harris Corporation



"Selex ES gained great benefits from the large-scale migration of Software Communications Architecture (SCA)-based techniques into the Software Defined Radio (SDR) range of products. With a mature technology foundation and now ready to enter into the market with very good sales prospects, it provides unprecedented advantages to the customer. These include using the same platform for different radio applications (waveforms and user services), featuring upgradeable and flexible solutions, supporting the rapid deployment of mission-ready systems."

Fabio Casalino, Selex ES



"The SCA specifications are an important corner stone to SDR standardization and - in combination with an open architecture and near target development platforms - a prerequisite to enable timely and cost efficient porting and integration of waveforms, especially multinational and secure waveforms for combined operations."

Rüdiger Leschhorn, Rohde & Schwarz

"ESSOR Nations and Industries have recognized the outstanding benefit of the SCA as the foundations for the SDR military business. The ESSOR Architecture extends the SCA in order to facilitate WF portability, addressing secure solutions for a large scope of military waveform applications."

Ugo Manetti, a4ESSOR SAS

Available Waveforms

SCA Based Waveforms - Deployed or under development*

- ANW2
- COBRA
- Easy II
- EPLRS
- FlexNet
- FM3TR
- Have Quick
- HF/VHF/UHF FF
- HF (various types)
- JTRS Bowman
- Link-16
- Mobile User Objective System (MUOS)
- PR4G-Fastnet
- Quicklook
- R&S HDR Waveforms
- SATURN
- SEM-Family
- SINCGARS
- Soldier Broadband Waveform (SBW)
- Soldier Radio Waveform (SRW)
- Talon
- TDRS Waveform
- UHF SATCOM
- VHF/UHF Line of Sight (VULOS)
- Wideband Networking Waveform (WNW)

SCA Based Waveforms – Coalition and International Programs*

- Coalition Wideband Networking Waveform (COALWNW)
- ESSOR High Data Rate Waveform (HDRWF)
- NATO Narrow Band Waveform

*These lists are representative, not all-inclusive



Other SCA Based Radios in Deployment

- RAFAEL BNET Software Defined Radio
- Harris Falcon III Radio Family
- Rockwell Collins/Thales FlexNet
- ViaSat/Rockwell Collins MIDS-JTRS
- Raytheon (RT-1987 / ARC231, MAINGATE, NMT, FAB-T)
- Rockwell Collins ARC-210 next gen
- Rohde & Schwarz R&S®SDTR Vehicular Tactical Radio
- Selex ES Swave™ Family (HH, VM-3, MB-1, VB-1, VQ-1)
- Thales (FlexNet, Fastnet, and Nextwave Families)
- Ultra Electronics TCS AN/GRC-245, HCR



- Multi-national SCA-based program
- National SCA Programs
- SCA-based Development and Manufacturing Centers
- Other countries who have announced or are evaluating adoption of SCA Based Software Defined Radios include: Brazil, India, Singapore, Turkey, The United Arab Emirates, Israel