Mini-Secure Communications Controller (Mini-SCC)

January 2021

Trident Systems Incorporated
www.tridsys.com

Radio Interoperability Problem

Domestic Operations

Coalition Communications

Armed forces and first responders regularly encounter radio systems that do not communicate with their own radios

Mini-SCC Product Overview

Technology

Man-portable audio cross-banding of disparate communications devices including Tactical Radios, Land Mobile Radios (LMR), (HF, UHF, VHF), SATCOM, public safety radios, partner nation radios, and cellular networks.

Need

- Supports audio interoperability of disparate radio networks
  - Regardless of radio type, frequency, hopset, encryption key

- Provides voice bridge between Joint Services, Partner nations forces and Non-Government Organizations (NGO).

Mini-SCCv1.1

Meets the NSA tactical voice bridge requirements
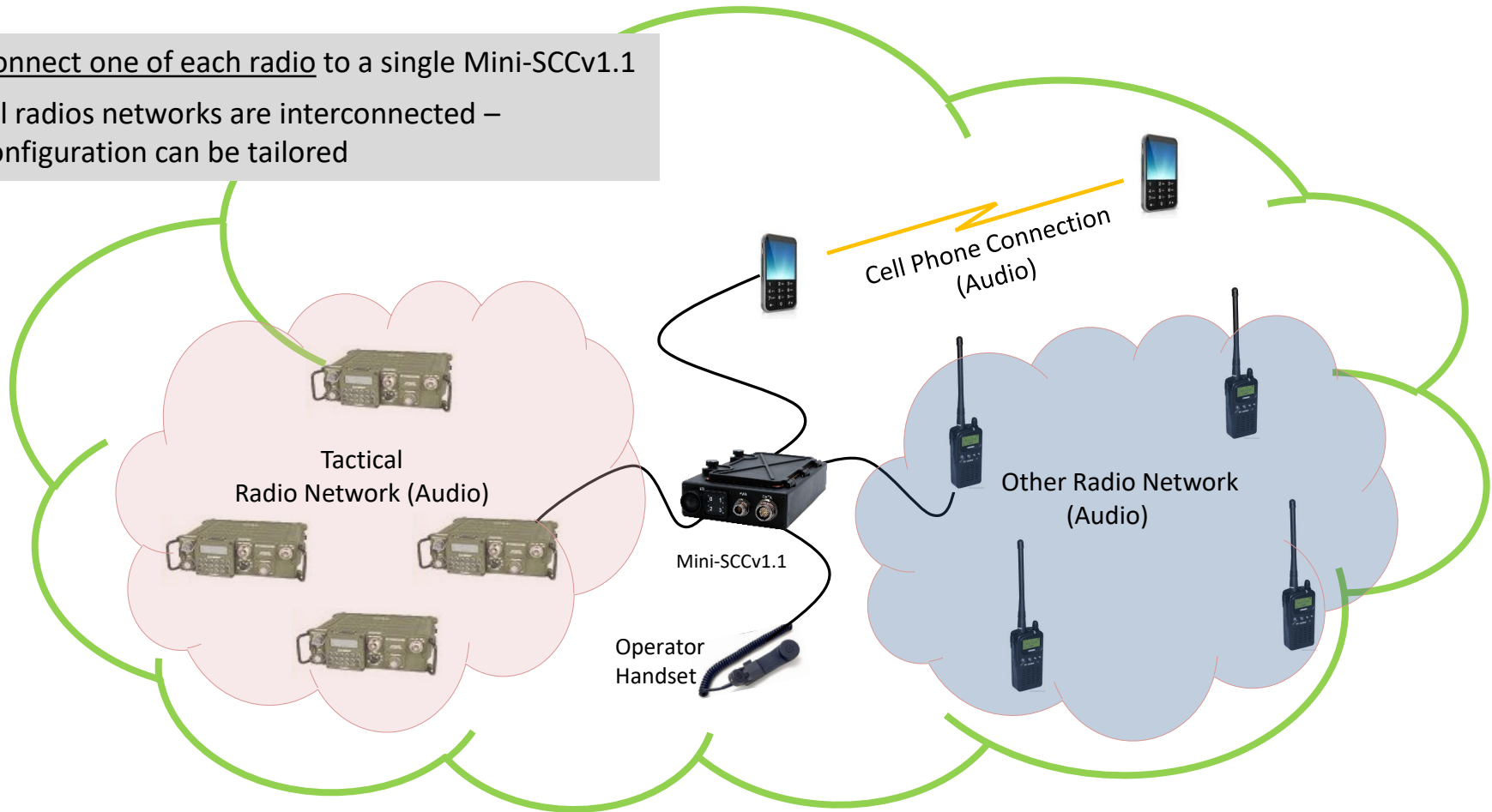Fielded by 8th Army (USFK) & USMC (in USMC Program of Record)

Radio interoperability of disparate networks
Regardless of radio type, frequency, hopset, encryption key

Radio interoperability of disparate networks
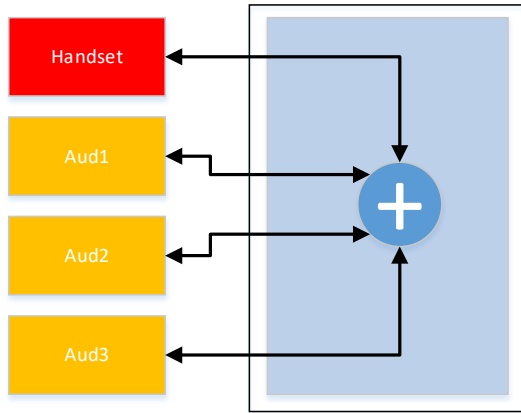Regardless of radio type, frequency, hopset, encryption key

TRIDENT

1. Connect one of each radio to a single Mini-SCCv1.1
2. All radios networks are interconnected – configuration can be tailored

Cell Phone Connection
(Audio)

Tactical
Radio Network (Audio)

Mini-SCCv1.1

Operator
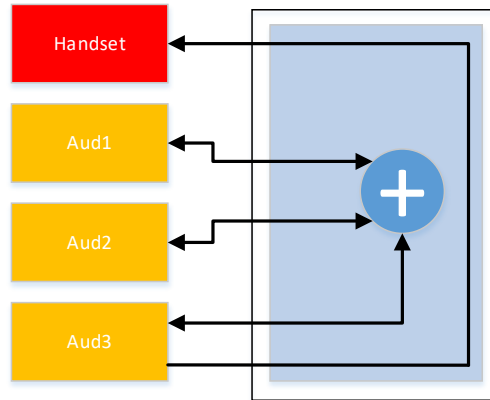Handset

Other Radio Network
(Audio)

Audio cross-link of cell phones, partner nation radio networks, US radio networks & local operator

- Handheld Size

- Multiple power options
  - *Including AA batteries*

- Fully Configurable

- MIL-STD-810, -461E, IP67 (waterproof)
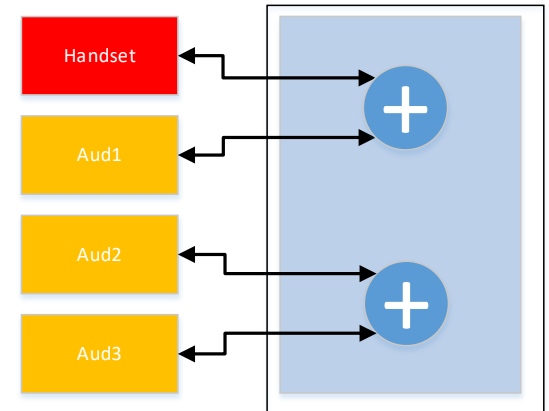
Cross-Link Flexibility

All Analog Radio Nets Tied

Supports one-way comms

Multiple Analog Radio Nets

System can be configured (and saved) for numerous connectivity permutations

Key Features

- Single unit: easy-to-use integrated solution

- Radio independent; not tied to manufacturer; works with intercoms

- Man-portable form-factor – (1.55"x 4.15"x 6.25)
  - Power: AA Batteries, BA-5590 equivalent, AC supply
  - Configurable front panel buttons for rapid profile changes
  - Configurable Infrared or Visible LEDs

- NO Software to load (any device with web-browser can configure)
  - Can be re-configured over a network via web-browser if desired

- NO Computer required for operation (runs as previously configured)

Radio Interfaces

- Audio cross-link of heterogeneous military tactical radios, cellular phones, other military radios, public safety radios
  - Tactical & Land Mobile Radios
    - North American, European & Australian Radios: Various, i.e. PRC-113, PRC-117F/G, PRC-119 (RT-1523), PRC-148, PRC-150 (VRC-104), PRC-152, PRC-154, PRC-155, PRC-158, PRC-160, PRC-162, PRC-522, RF-5800 series, RF-7800, PSC-5D, URC-200, URC-300, ARC-210, PRC-6809, RT-1702, PRC-138 (RF-5200), 2110, Sentry-H 6110-MP, PRC-624, HF-6000, HF-8000, MCTR 7200, HH2100V, PRC-1077, PRC-1099, RT-7000, RT-7700H, PRC-2080+, PRC-2081+, RF23, RF2350, RF40, TRC 3600, TW-135, PR4G F@stnet family, TRC-3700, TRC-3730, SRT 633, SEM 52A, SEM 52S, SEM 52SL, SEM 70, MR300xH/U, M3TR, Bowman Radio System, PRC-325 and others
    - Israel: i.e. CNR-710, CNR-9000 and other variants
    - Republic of Korea (ROK): PRC-999K (RT-314K), PRC-950K
    - Japan: Broadband Multipurpose Wireless (BMW) Radio
  - Cellular (Android, iPhone)
  - Public safety radios (e.g. Motorola DP 4401, XTS & APX Series, PR1500, MT1500, Harris XL P Series, BK KNG-P Series, Hytera PD702, PD782, PD785, PD982, and various ICOM radios)

Radios above are only examples; The Mini-SCCv1.1 supports virtually **any** radio.

New Radio Interfaces

- If a new radio (with uncommon connector) is identified:

  - Use 'Fly-away Cable Kit' to build field-prototype cable

  Fly-away Cable Kit

  - Provide radio details to Trident for development of sample radio interface cables

  Radio Interface Cable

The handset connection & pinout are all that are needed to build a new radio interface cable

SWaP:
- Size: 6.28" x 1.55" x 4.15" (excluding connectors)
- Weight: 2lbs 5oz (with batteries)
- Power: 6-36VDC input
  - 8 AA L91 batteries (12+ hour runtime)
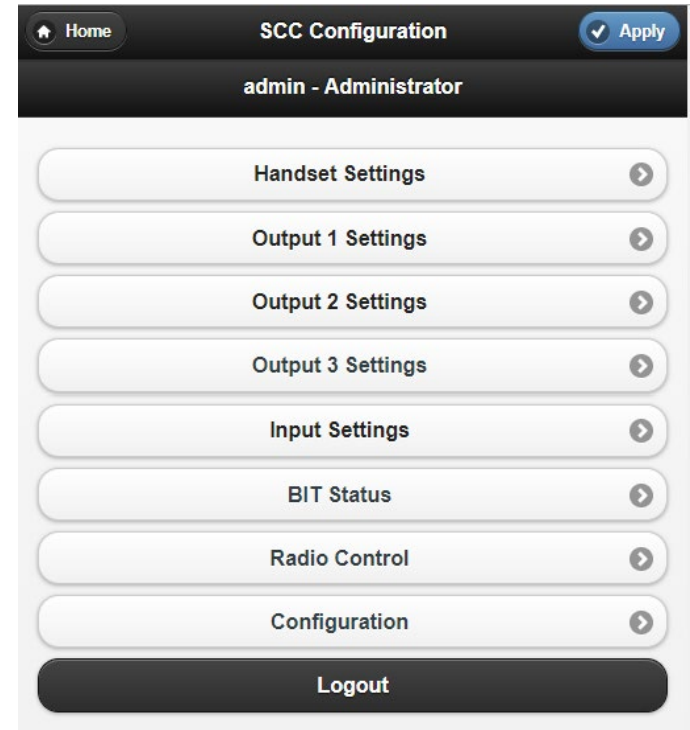 - COTS BA-5590 power adapter
  - AC Adapter

I/O:
- 3 Audio Channels + 1 H-250/U Handset
- 1 Data Port
  - 1 USB Port
  - 1 Serial Console
  - 1 Ethernet Port
- Configurable front panel buttons
  - Rapid profile changes
- Configurable Infrared and Visible LEDs

EQT:
- Tested to IP67 Water Ingress (1m)
- Tested to MIL-STD-461F, MIL-STD-810G

System Software

- <u>Provides web browser GUI to control and monitor audio cross linking capabilities</u>

- Accessible via Android and iPhones over secure Wi-Fi

- Supports multiple permission levels with secure login

- Audio level adjustments, muting, and cross linking

- Built In Test (BIT)

Web-Based Audio Control Software

Software is for advanced configuration; not required for operation

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