EIDEL

EIDSVOLL ELECTRONICS AS

RCS

Radio Control System

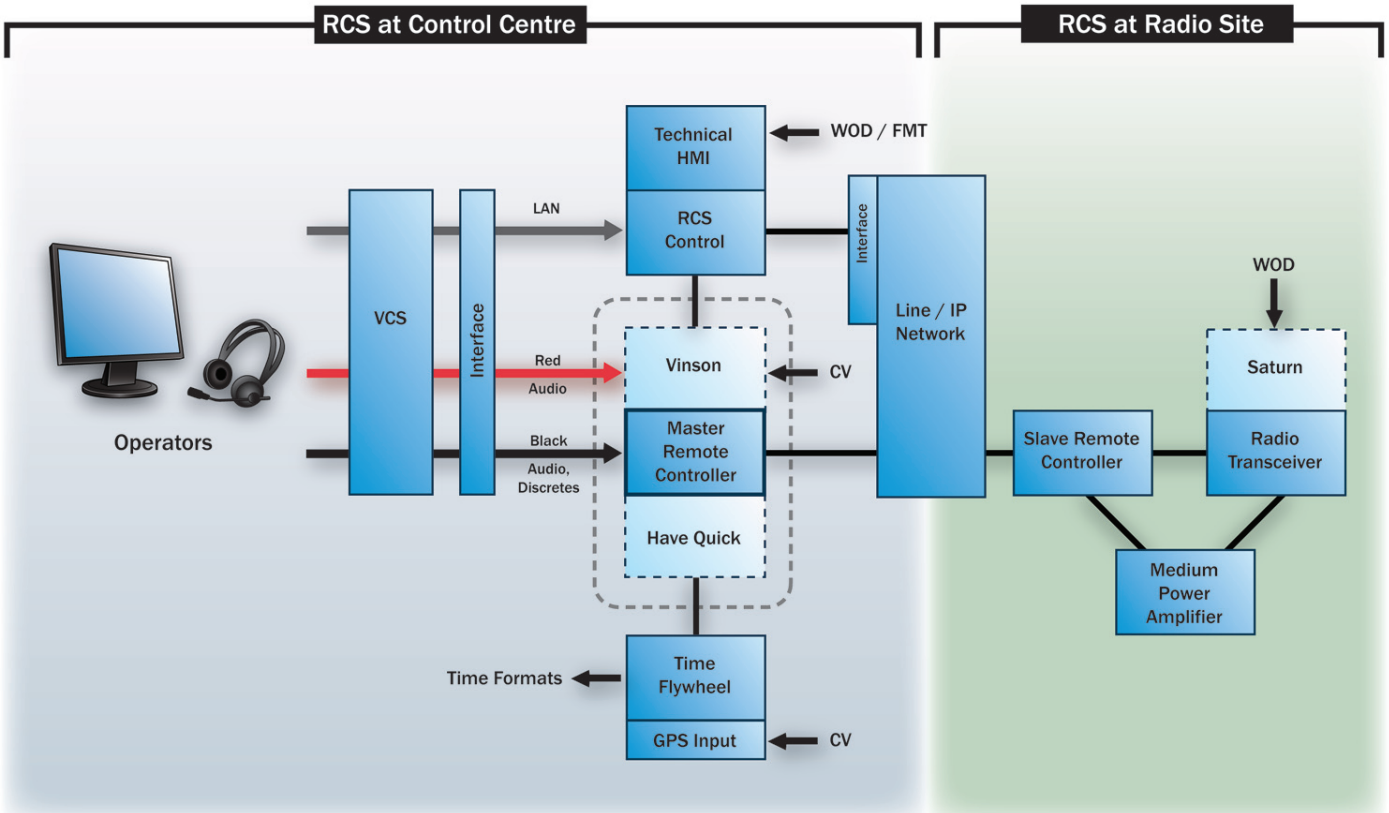
The purpose of the Radio Control System (RCS) is to provide voice communication using remotely controlled radio equipment. This allows the radio operator and the radio equipment to be placed in different geographical locations. The voice link can be made resistant against jamming, and supports both plain and encrypted speech. The system is fully operational in Norway and in the Baltic countries.

Vinson Speech Encryption equipment and Have Quick Anti-Jam equipment expands the functional capacity of the Master Remote Controller equipment. Medium Power Amplifier equipment and Saturn equipment expands the functional capacity of the Radio. Except for the Saturn equipment, there is no need for Radio Site security classification.

Geographically, the system is divided into two parts. An operator interface and master remote controllers are located at a control centre and at the radio site, a slave remote controller links the radio transceiver into the system via a backbone network.

The operator interface connects to a master remote controller with the required Have Quick II ECCM and/or Vinson KY-58/KY-100 encryption capacity. The master remote controller connects to the slave remote controller at the radio site through a digital, line switched network.

The operator enables and disables the Have Quick and/or Vinson functionality during operation as easily as changing frequency on the radio. The radio management system provides the capability via a master remote controller to connect or disconnect remote radios to maximise capacity.



FEATURES

- Operationally fielded since 1999
- Encrypted speech (KY-58, KY-100)
- Anti jamming
- Time synchronisation accuracy better than 1 ms
- COTS independent
- Up to 2500km separation between control centre and radio
- Supports any radio type
- Up to 1000 radios can be connected
- NATO Accredited
- ACCS compatible
- Saturn compatible

KEY BENEFITS

- All sensitive equipment installed at the control centre
- Unclassified radio sites
- Remote Radio control
- Remote loading of Word Of Day (WOD)
- Network independent
- Reduced man-power
- Flexible selection (any operator can choose any radio in the system)
- Reduces the required number of HQ and Vinson radios

A time sub-system receives the time from the GPS and can maintain this time correctly for 6-9 months. The time sub-system forwards the time to the Have Quick and the radio management system. Other timing protocols and standards are made available to other internal and external sub-systems i.e. IRIG formats and NMEA formats. The time system supports a number of different GPS receivers such as MPE-II and MPE-S following the GRAM standard.

The Have Quick II ECCM sub-system setup, i.e Word-of-Day, Time-of-Day and Frequency Management Training nets, is controlled from the radio management sub-system.

The Vinson encryption sub-system supports both KY-58 or KY-100 encryption units, and loading of crypto variable from KYK-13 or similar directly into the encryption units.

Due to all functionality being located at the control centre, there is no classified information stored or forwarded at the radio site.

The system can handle up to 300 master controllers within one control centre, and more than 1000 slave remote controllers.

TECHNICAL DATA

- **The system is accredited for use within NATO**
- **Distance between control centre and radio may be up to 3000km**
- **Time synchronisation accuracy between radio in Air craft and radio at the radio-site is better than 1 ms**
- **Time protocols Have Quick II, IRIG and NMEA**
- **Time drift is less than 1 ms through a period of 6 months**
- **MTBF on modules is better than 150 000 hours**

OPERATIONAL EXPERIENCE

- **2 CRC and 2 local control centres in Norway, since 1999**
- **Deployable ACU in Poland, Lithuania and Norway**
- **One Control centre in Lithuania with radio sites in Estonia, Latvia and Lithuania**
- **Nationwide time distribution since 1991**

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A Windows-based radio management, controls the other system modules from a pair of redundantly connected computers. A firewall prevents and reports illegal commands.

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