ISS SUITE

Air Traffic Control Center Recording & Playback

HIGHLIGHTS

- **Distributed architecture**: flexible, scalable and redundant

- **Multi-format acquisition:** Video, Audio, Data and Discrete
    - Video: DVI up to 2048 x 2048 or 2560 x 1600 and up to 20 fps
      (for more detail, refer to CWP Guard units)
    - Audio: Analog 600Ω interface 2/4 wires
      (for more detail, refer to AAR units)
    - Discrete interface
      (for more detail, refer to MS CAT units)

- **Multi-protocol data acquisition**: processing data packets based on different formats and protocols:
    - HDLC
    - LAP-B
    - AFTN (IA5)
    - CD2
    - ASTERIX Cat 1, 2, 34, 48, etc
    - AIRCAT500, edition
    - MODM

- **Real-time and post-acquisition advanced data analysis**, decoding data packets with several protocol decoders

- **High integration of all components**, using a common format (**TIS**) to exchange data

- Friendly Graphical User Interface

The ISS suite is a complete network solution designed to record, playback and analyze all data exchanged in ATC environment.

The suite can be used for Servicing purposes or for supervision purpose in full operation.

The suite is based on hardware and software components.

Acquisition and Sampling

These components interface the hardware acquisition peripherals to generate information flows towards storage components.
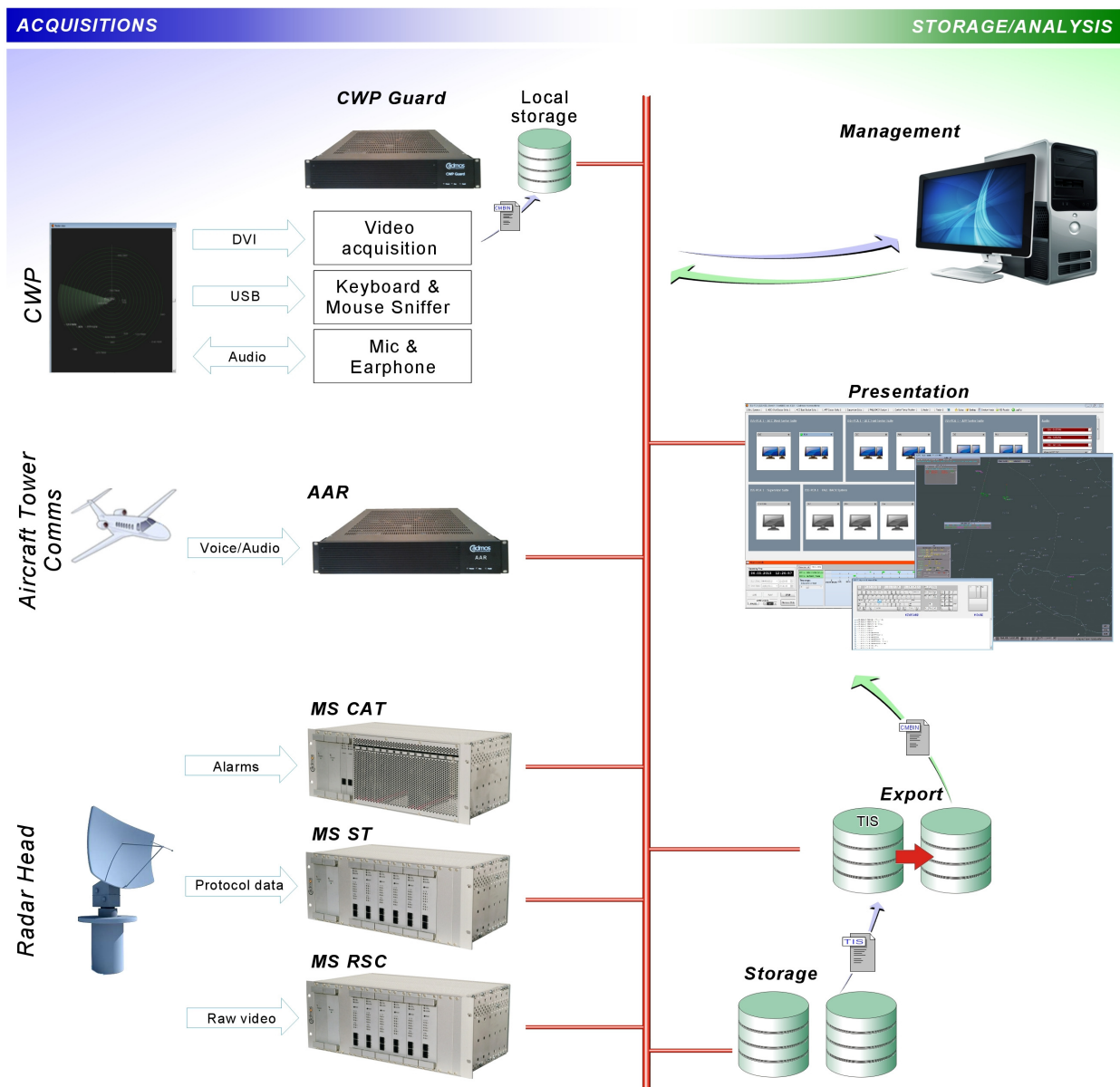
Their configuration and control is achieved by the management system.

Thanks to the distributed architecture some of the acquisition components can integrate local storage functionality in ordert to limit the bandwidth occupation on the network (CWP Guard).

1) CWP Guard (Video, Audio, Kb+Mouse) (consumption 400W)
2) Analog Audio Recorder (consumption 400W)
3) MediaSwitch ST
4) MediaSwitch RSC
5) MediaSwitch CAT

The data flows generated by these components are sent via sockets to the storage components of the system.

Cadmos MDA
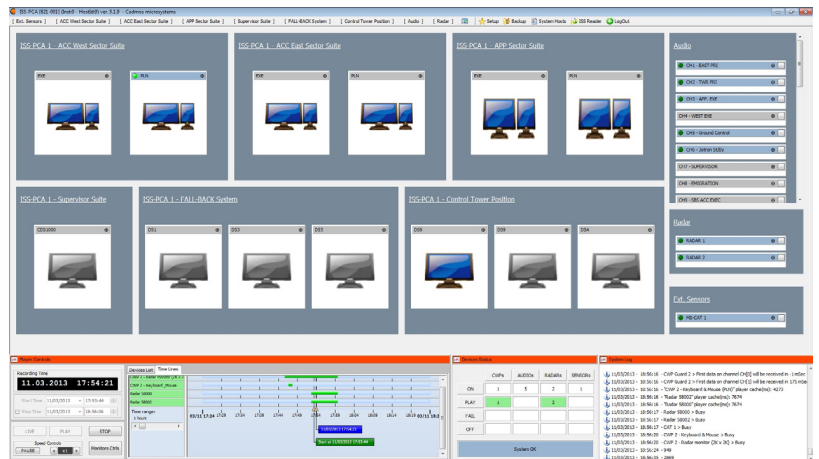### (Multi-platform Distributed Architecture)

Presentation

Presentation components are software modules devoted to synchronize presentation of different data flows in a consistent context, reproducing and showing the operator a complete and clear scenario.

In the same application environment, several presentation components are available, specialized for different data flow typologies:

1) Synthetic Radar Data (Asterix, AIRCAT500, etc.)
2) Raw Radar Data (Raw Video)
3) Video Player
4) Audio Player
5) Viewer (Kb/Mouse actions)

Presentation components are used to monitor the entire radar communication system, performing data packets acquisition from Storage System by LAN.

They perform real-time and post acquisition analysis of acquired data.

Players:

The Recorder writes captured data packets inside files. The Player can reload these files, playback data packets and forwards them to one or more destination. Replaying files and forward destinations must be select before starting the player.

Also the User Interface of the Player is basically a control panel on which are present:

- two digital displays (data packets and time) in the upper side,
- player operative controls (Play, Pause, and Stop), located on the lower left side,
- player setup and data viewer controls, located in the lower right side.

During playing, replayed data packets can be analyzed by opening the Data Viewer.

Export

These components allow to export in a single standard format data stream (e.g. AVI), one or more synchronized information flows related to a specific context.

Management

Management components achieve a consistent control upon all system components, performing the following functions:

1) Components configuration
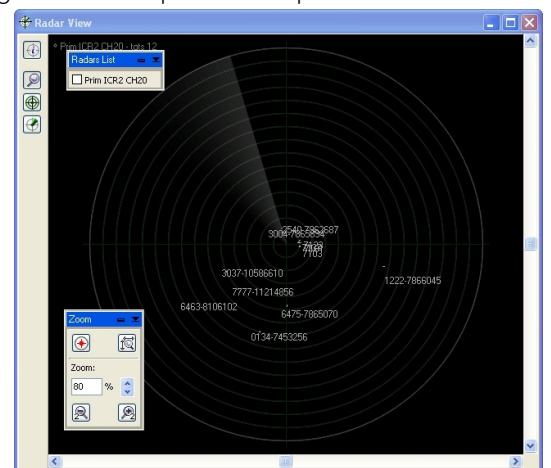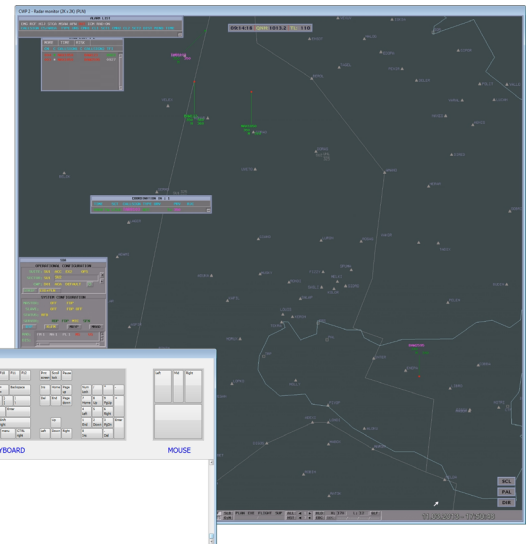2) Components control
3) Data flow path control

Storage:

The components that store data flows can record any type of information coming from the acquisition components in a common format, inserting a high precision time-stamp for data flow synchronization during the presentation and export phases. As for acquisition components, the management system controls configuration and execution of storage components. Storage processes can be instantiated on dedicated servers (centralized storage) or locally on the node which interfaces acquisition peripherals.

The recorder is designed to acquire and record data packets, selecting for source and destination (also identified as "node").

TIS file format:

TIS is a proprietary binary file format, optimized to allows data exchange between all components, as a unified complete environment.

In this way, data acquired during installation, service or operation, can be used by all Radar GLUE components to perform advanced analysis.

Integrated Surveillance Suite

P/N	Product	Description
821-001	ISS-PCA	Playback Console Application
821-002	ISS-ICR	ISS Capture Recorder
821-004	ISS-CSD	Configuration Server Daemon
821-005	ISS-CGD	Control Gateway Daemon
821-010	ISS-NTPSync	NTP Synchronization Daemon
821-011	ISS-ArchMgr	Archive Manager
808-001	CWP Guard	CWP Recorder
807-001	AAR	Analog Audio Recorder
807-004	DAR	Digital Audio Recorder
807-005	VAR	VoIP Audio Recorder

System can also integrated with the following Media System units

804-001/ST	MS-ST	ATC Router (Synthetic Data)
804-001/RSC	MS-SRC	Radar Scan Converter (Raw Data)
804-001/CAT	MS-CAT	Control, Alarm and Telecontrol

For more information about our products, please visit

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