

## RAVIS<sup>®</sup> MAINTENANCE AND CONTROL SOFTWARE

Ravis<sup>®</sup> is the most advanced program for weather radar supervision available on the market today. The software is an ideal tool set for field engineers and service personnel providing users with a comfortable graphical environment that fully supports configuration, alignment, control, diagnostics and radar data display. Ravis<sup>®</sup> supervises the radar systems or the individual units connected to the customer's network in real-time and from any location.

Ravis<sup>®</sup> is highly flexible and due to its use of the Java<sup>™</sup> platform can be installed on a wide range of operating systems. The software automatically detects the type of weather radar connected, its configuration and the options available. The program menu adapts accordingly. Ravis<sup>®</sup> is an ideal solution for heterogeneous radar networks that integrate different types of weather radars. Ravis<sup>®</sup> is powerful and highly flexible. It handles the large number of online status indicators produced by modern high-end weather radars and can be easily customized to suit individual radar network architectures or individual add-on components such as UPS or fire alarm systems.

# **DESIGN PRINCIPLES**

Ravis® is built on LEONARDO Germany's RCL (Radar Control Language) and communication backbone NGS, which supports interaction within a TCP/IP based multisensor intranet. The RCL/NGS backbone enables parallel Ravis® online connections. As a result, radar data can be viewed within the intranet or at any remote site.

Ravis<sup>®</sup> can either connect directly to the radar or through the NGS network. The NGS serves as a proxy in this case, therefore multiple Ravis<sup>®</sup> applications can connect to a single data stream coming from a remote radar site. This ensures the most efficient use of limited bandwidth capacities.

# **KEY FEATURES**

- Platform independent Java™ application
- System-auto-detect feature: During logon, Ravis® analyzes the connected radar type and adapts its views and controls accordingly
- Hierarchal visualization of radar sub systems and interconnections
- Real-time radar data displays scalable up to 256 color levels
- Data zooming and panning
- Guided radar calibrations
- Data/status snapshot and sequence record/replay
- Context sensitive Online-Help



# RAVIS OFFERS THE FOLLOWING BASIC FUNCTIONS:

### SYSTEM SUPERVISION

- Schematic visualization of radar subsystems and inter connections
- Hierarchical structured color coded visualization of radar status and health condition
- Maintenance level depending BiTE presentation covering typically more than 1500 different radar status indications
- User configurable dashboard summarizing important radar BiTE information
- In-place short-term time series of selected BiTE data
- Long-term time series and comparison of BiTE data



## RADAR DATA SUPERVISON

- Presentation style: PPI, RHI, A-SCOPE, B-SCOPE
- Output data: UZ, CZ, V, W, ZDR, φDP, KDP, ρHV, LDR
- Intermediate data: I, Q, LOG, CSR, SQI, Spectrum Power/Phase, TX plot, TX power, TX phase, TX power spectrum
- Data zooming and panning



#### ANTENNA CONTROL

• Velocity and position control via sliders and quick step fields

#### SOLAR RASTER SCAN FEATURE

- Antenna north alignment and elevation levelling
- System gain offset using solar flux
- ZDR offset of receive chain
- Antenna beam width measurement



#### SCAN WORKSHEET

- Cross-checking of all scan relevant parameters
- Visualization of current scan parameters

Scan Worksheet									ſ Ē
Ese Joots Help									
🕨 Start Scan 🚺 S	how scan pagar	neters							
Data types			Transmitter			Thresholds			
Data type scaling:		Setup	Polarization:	boli noli	-	LOG (dB):	2.5		
Recording			TX-correction:	: Ampl. + Phase	-	CCOR (IE):	30.0		
IQ recording:	Disabled	-	PRF1 (Rz):	350.0		SQE	0.4		
Power spectrum:	Disabled	-	Pulse width (p	ni: 1.0	-	SQI2:	0.5		
Antenna			Stapper mode	Stapper mode: None 💌 - Domain processing					
Angle synchro:	Azimuth	-		None	-	Туре:	Frequency	-	E
Scan step (*):	1.0	-	-			filter			
	512			Atuance	d	Clutter filter type:	Standard	-	
Super resolution:			Trip receivery			Clutter filter width (m/s):	None		
Range			Trip processie		<b>T</b>	Speckle filter type:	None	-	
Stop (km):	100	-	- MTCOR Bresh	tole (dB): 20		Interference filter mode:	or		-
Step (km):	0.100	-				Natched liter type:	Dynamic	-	
Average:	1	-							-

#### GDRX® DIGITAL RECEIVER & SIGNAL PROCESSOR STATUS CONTROL AND CALIBRATION

- Manages more than 600 different digital receiver and signal processor parameters
- One-click calibration for noise level detection, single

Safety circuits Dual po	larization offsets	Sector blank	ing		
Miscellaneous settings			Process par	ameter BiTE	
Single point calibra	tion	Noise figure			
Trigger settings	TX calibration	RX ca	libration	Zero check	
Channel correction	in-j	phase	0	uadrature	
Horizontal high	1.000	bhase	0.000	uadrature	
Horizontal high		bhase		uadrature	
Horizontal high Horizontal low Vertical high	1.000 -46.882 1.000	bhase	0.000	uadrature	
Horizontal high Horizontal low	1.000 -46.882	bhase	0.000	uadrature	
Horizontal high Horizontal low Vertical high Vertical low	1.000 -46.882 1.000 -19.029	phase	0.000 11.352 0.000 41.611	uadrature	
Horizontal high Horizontal low Vertical high Vertical low Descripti	1.000 -46.882 1.000 -19.029 on		0.000 11.352 0.000	uadrature	
Horizontal high Horizontal low Vertical high Vertical low	1.000 -46.882 1.000 -19.029 on	33.6676	0.000 11.352 0.000 41.611	uadrature	
Horizontal high Horizontal low Vertical high Vertical low Descripti Channel power difference F Channel phase difference F	1.000 -46.882 1.000 -19.029 on H (dB) H (rad)	33.6676 2.9040	0.000 11.352 0.000 41.611	uadrature	
Horizontal high Horizontal low Vertical high Vertical low Descripti Channel power difference H	1.000 -46.882 1.000 -19.029 on H (dB) H (rad)	33.6676	0.000 11.352 0.000 41.611	uadrature	

## RADAR STATUS RECORDER

• Record radar status in real-time for maintenance and educational purpose

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