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Ganesha Avionics
Air Traffic Control System

HANNOVER MESSE
MAKING INDONESIA 4.0
PARTNER COUNTRY 2023

GANESHA AVIONICS
ETHERNITY

RADAR Data Interface

ABOUT GA-ETHERNITY

The problems that are often encountered in the integration of the RADAR systems with the Air Traffic Controller System (ATCS) is data format mismatch where data is provided from the RADAR system cannot be recognized by the Air Traffic Controller System (ATCS). This problem compounded by inappropriate formatting data used with the available communication infrastructure.

A data compatibility issue occurred because of the RADAR system, the ATC system as well infrastructure comes from different vendors which implements the proprietary format. Data format issues appears due to differences in the age of system too which are far apart so that the data format implemented is lagging behind and already replaced by the new standard data format.

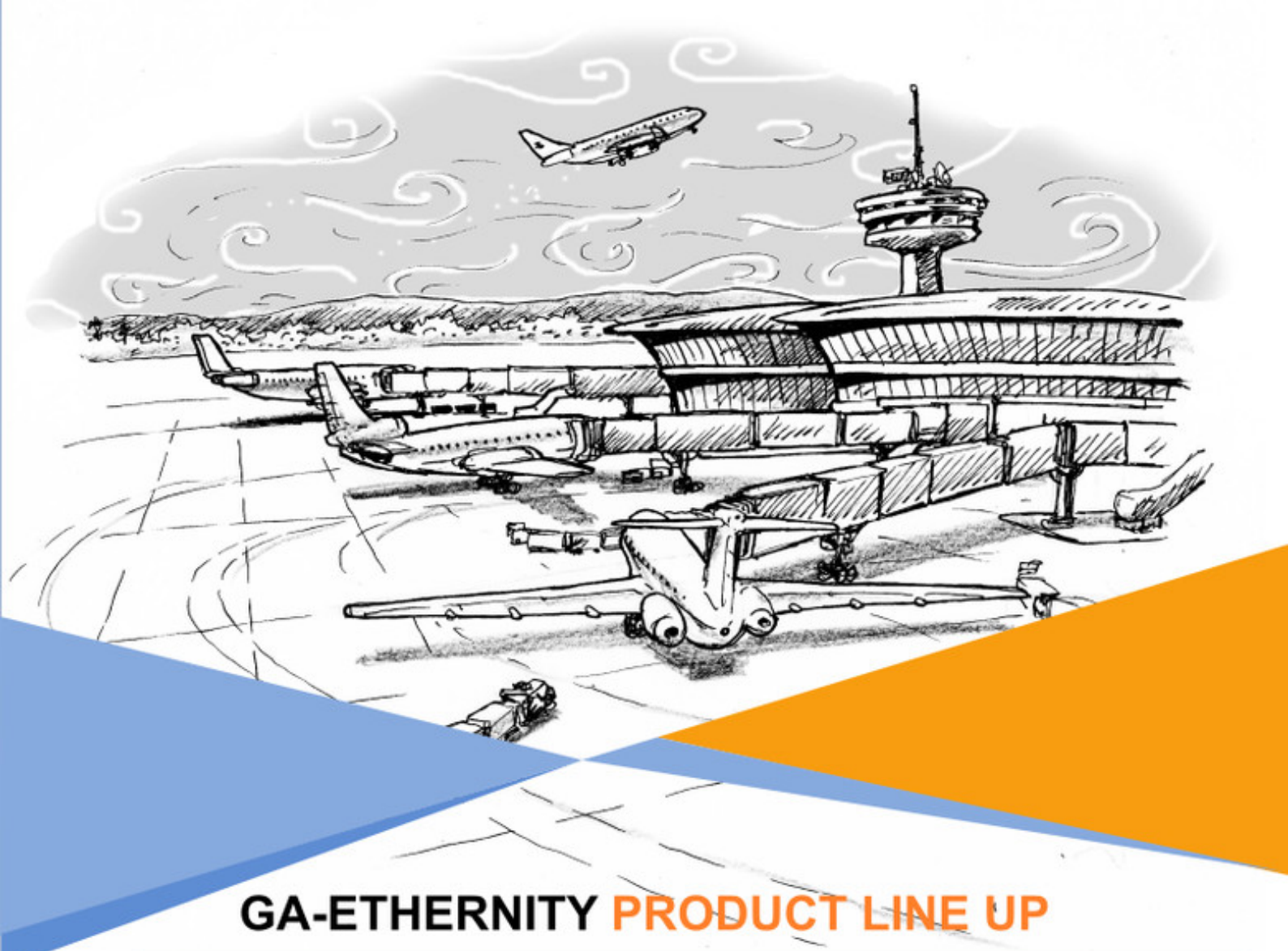
Ganesha Avionics Ethernity is present as the solution to data compatibility problems previously described. Ethernity are designed as devices that bridge compatibility between the data source (RADAR system) and consumer data (ATC system) through available infrastructure (LAN as well Satellite).

Ethernity is able to adapt data from old RADAR systems to suit the needs of modern ATC systems based on TCP / IP. Ethernity is also capable of converting TCP / IP data from modern RADAR systems into serial syncronous data so that it can be transmitted over legacy infrastructure that only recognizes serial communications.

The data conversion capability of Ethernity devices can be further customized so that the Ethernity device can become a communication bridge between the RADAR system and the ATC system which previously had integration problems because each system vendor implements its proprietary data format.

Another advantage of Ethernity devices is the ability to receive input from multiple RADARs (multiRADAR) for later processes the data to be transmitted to systems that require RADAR data.

With its capabilities, Ethernity is one of the best solutions in RADAR data integration.



GA-ETHERNITY PRODUCT LINE UP

	Ethernity – MRS series	Ethernity – SIP Series	Mini Ethernity
Function	Convert synchronized serial data to TCP/IP format Multi Radar Support	Convert synchronized serial data to TCP/IP format or TCP/IP to synchronized serial data (configurable) Synchronized Serial <=> TCP/IP Interface	Supporting hardware for Ganesha Avionics Mobile RAZER (Radar Data Analyzer)
Hardware			
Form Factor	Rackmount 1U	Rackmount 1U	Portable
Input	4x RJ45 Serial Interface	1x DB25, 1x DB9 and 1x RJ45 Ethernet (Input/Output depend on Configuration)	1x USB Port Type B
Output	1x RJ45 Ethernet		2x DB25 Serial Interface
Console/Debug Port	USB or DB9	USB	USB
Power Supply	220-240V		USB Powered
Software			
Supported Data Format	Asterix CAT 34 CAT 48 CAT 62 PR800 EV760		
Data Interface	Synchronous Serial => TCP/IP	Synchronous Serial <=> TCP/IP	Synchronous Serial => TCP/IP
Data Radar Hub	Up to 4 Radars	1 Radar	Up to 2 Radars
Redundant Configuration	Support Automatic Fail Over Configuration (Primary – Secondary Mode)		Not Supported

GA-Ethernity has been implemented at several airports in Indonesia:

- Polonia Airport, Medan - North Sumatera
- Supadio International Airport, Pontianak - West Kalimantan
- Sultan Hasanuddin International Airport, Makassar - South Sulawesi

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