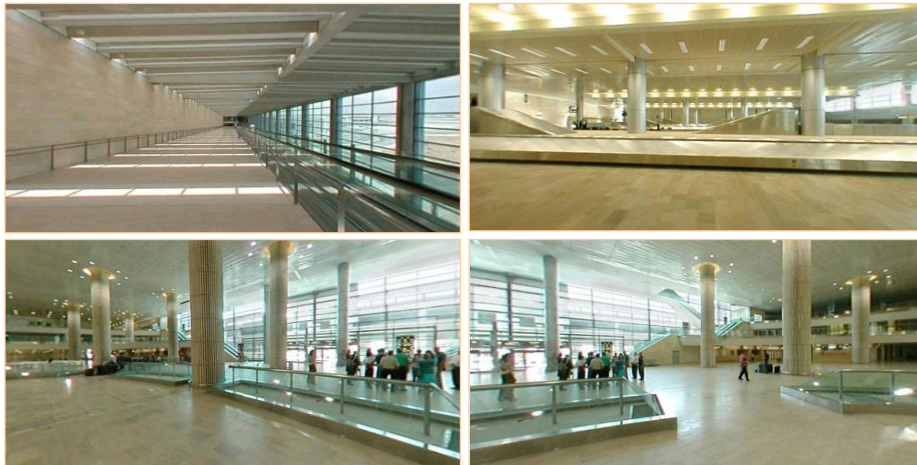# Pulse - Case Study

Ben Gurion International Airport, Israel

Terminal 3 – Open and Running using Pulse

Terminal 3 at Ben-Gurion International Airport is the newest terminal and has been in service for over a decade. Expanding Israel's main international airport, Terminal 3, relieves passenger congestion while also changing the entire area economically and financially. Terminal 3 is a SCADA project that uses AFCON's PULSE SCADA solution as an EMCS Energy Management Control System to manage all terminal energy supply and distribute the energy to all terminal consuming systems, such as EHV Substation, dozens of 22kV Substations and Power Stations, Gas Supply, etc.

The EMCS was upgraded in 2019 from P-CIM to the latest revision at that time, PULSE 4.13 (the P-CIM successor).

Pulse™ performs the following:

- ◙ Controls*,* monitors, and maintains 161kV high voltage power line at the Terminal 3 sub-station.
- ◙ Controls 22kV high voltage power distribution.
- ◙ Controls and monitors power station built from 5 diesel/gas generators producing up to 22mW.
- ◙ Controls and monitors gas supply and distribution to different consumers along the terminal.
- ◙ Controls and monitors air conditioning throughout Terminal 3 and auxiliary areas.
- ◙ Controls and monitors energy loads.
- ◙ High voltage energy calculations and distribution after analyzing requirements at Load Shedding process.
- ◙ Controls petrol resources and leakage from containers at the fuel farm.
- ◙ Monitors and controls power levels from hundreds of energy meters.
- ◙ Controls water pumping and drainage systems.
- ◙ Controls and monitors hot/cold water processing at the Energy Center.
- ◙ Controls/monitors the Load Shedding process after the main electricity supply shuts down.
- ◙ Monitors Reverse Osmosis systems controlled by Omron PLCs.
- ◙ Collects events and displays them in the Pulse Alarm Manager.

Pulse - Case Study

Architecture

◙ Hot backup through Pulse Redundancy servers (licenses for 30 stations) backed up by 2 Ethernet ports from two distinct multi-line switches. An Ethernet connection serves as the replication line for data synchronization between servers.

◙ Thirty workstations attached to multi-lined Ethernet through link protectors. During failure, systems automatically move to the secondary switch, which works without interruption.
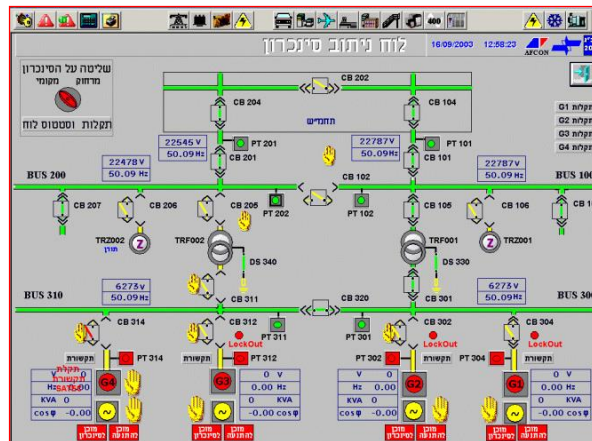
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