

ANTS Co., Ltd.

Railway Vehicles Electronic Parts
Manufacturing Enterprise



ABOUT ANTS



Dear Customers

Established in 2006, Ants has been dedicated to securing the technology of electrical equipment and software for railway rolling stock based on research and development in the field of IT industry.

We have developed the broadcasting indicator device for railway rolling stock as main focus. We have maintained steady supply performance at domestic and overseas, such as SEPTA in USA, DEMU in Indonesia, MTR in HK, TRIMET in USA, KTX-Sancheon.

At the end of 2014, We succeeded in developing traction improving system for 8200 series electronic locomotive

and secured the MVB, communication technology that is the basis for the localization of electrical equipment for railway rolling stock. Based on the development and supply of broadcasting indicator, HVAC Controller, etc., we have also proved our technology in the field of SW.

In addition, we are also developing software and displays that can remotely manage the images and information of the composite display Kiosk. In the future, we will continue to play a leading role in sustainability management with our pleasant railway environment and social responsibility.

CEO Tae-sung, An of ANTS Co., Ltd.

HISTORY

2018



- Certified Busan Korea Business leader award
- Developed Tachometer for ATC(automatic train controller)
- Served ATC Tachometer repair to Seoul 5/7/8 line electric cars
- Move office(Songjung-dong, Haeundae-gu, Busan, KR)

2017

- Certified Youth friendly small giant and Busan Korea Leading company
- Developed ATC Filter Board to SMRT 6 line
- Certified Korea SW(software) Product quality award

2015-2016



- Certified HR Development company and Busan Korea Employment award
- Certified Main-biz and ISO 9001 (2015)
- Developed practical use of Power conversion and Train control monitoring system for 8200 series electric locomotive
- Developed practical use of SIV for 8200 series electric locomotive
- Developed ATP MMI for Electric and Diesel locomotive

2013-2014

- Supplied Broadcasting indicator(VRX and 8 more) to DEMU, IDN
- Supplied Broadcasting indicator(LEDc and 3 more) to TACOMA, USA
- Supplied Broadcasting indicator(VRX and 23 more) to KTX-Honam 220 cars, KR
- Served Passenger terminal technology to Next generation electric railway
- Supplied Broadcasting indicator to DENVER RTD, USA

2011-2012



- Established Annex research center
- Registered Factory to Knowledge industry center, Centum city, Busan, KR
- Supplied Server improvement to Gwangmyeong/Jungang/Gyeongui lines, KR
- Developed Peak power reduction technology for High-speed train
- Certified Inno-biz and Venture company
- Developed Traction improving system for 8200 series electric locomotive
- Supplied Broadcasting indicator(CNCS and 10 more) to DENVER 50 cars, USA
- Supplied Broadcasting indicator to High-speed train 220 cars, KORAIL, KR

2008-2010

- Supplied Broadcasting indicator to KTX-Sancheon 100/90/50 cars, KR
- Supplied Broadcasting indicator(VRX and 5 more) to Seoul-Metro 2 and 9 lines
- Supplied Broadcasting indicator(VRX and 13 more) to SEPTA 120 cars, USA
- Supplied Broadcasting indicator to Incheon airport railway 84 cars, KR

2006.3.31



- Established ANTS Co., Ltd.

CERTIFICATION



Leading Company
Busan Metropolitan City Hall, KR



Business Leader Award
Busan Metropolitan City Hall, KR



Excellent Businessman
Busan Metropolitan City Hall, KR



Employment Award
Busan Regional Ministry of Employment and Labor, KR



HR Development Company
Ministry of SMEs and Startups, KR



Youth Friendly Small Giant
Ministry of Employment and Labor, KR



ISO 9001:2015
SGS, SUI



Korea SW Product Quality Award
National IT Industry Promotion Agency, KR



Research Institute
Korea Industrial Technology Association, KR



Main Biz
Ministry of SMEs and Startups, KR



Inno Biz
Ministry of SMEs and Startups, KR



Venture Business
Korea Technology Finance corporation

PROPERTY



Test aids
Patent



System and methods for Train running information
Patent



Monitoring system for Energy storage facility
Patent



Date analysis device of MVB communication
Patent



MVB PC 104 FPGA Logic program
Copyright registration



CCU MMI Program
Copyright registration



MVB Communications anlysis sstern for TCU
Program registration



MMI Test for Peak power reduction device
Program registration



PLC Switchboard and Control methods
Patent application



Vehicles controller
Patent application



TCMS Level 1 MVB Test EMD
Bombardier Inc.



TCMS Level 1 MVB Test ESD
Bombardier Inc.

I. RAILWAY SOLUTION

Provides tester, TCN, signal device, controller, PA/PIS/CCTV, parts of Railway rolling stock for Technology of IT.

Solutions part of railway rolling stock is developed for diversity of communication(RS 485, MVB, TRDP) in EN 50155(Transit and certification standards). Parts for all of the TCN products have been certified TCMS level 1 MVB conformance test(EMD/ESD) in IEC 61375 certification standards.

[PA/PIS/CCTV]



PIS Server



Front station indicator



Intercom



In/Outdoor Camera



Side station indicator



Side vehicle indicator



Passenger guide device

[CONTROLLER]



TCMS MMI



PLC Switchboard



HVAC Controller

[SIGNAL DEVICE]



ADU



ATP MMI



ATC Filter



Tachometer



[TCN]



TRDP CVT



MVB PC 104(EMD/ESD)



MVB Data logger

[TESTER]



SEPTA BTE



TRIMET BTE



Portable Type



II. SOFTWARE SOLUTION

Software solution's developed for Display solution and Railway rolling stock.

- User interaction controllers of software for Touch MMI products
- Communication emulator Ya-G for Packet analysis data
- Energy monitoring software using database unit
- Contents planning and Management software
- Other application software

User interaction controllers of software for Touch MMI products

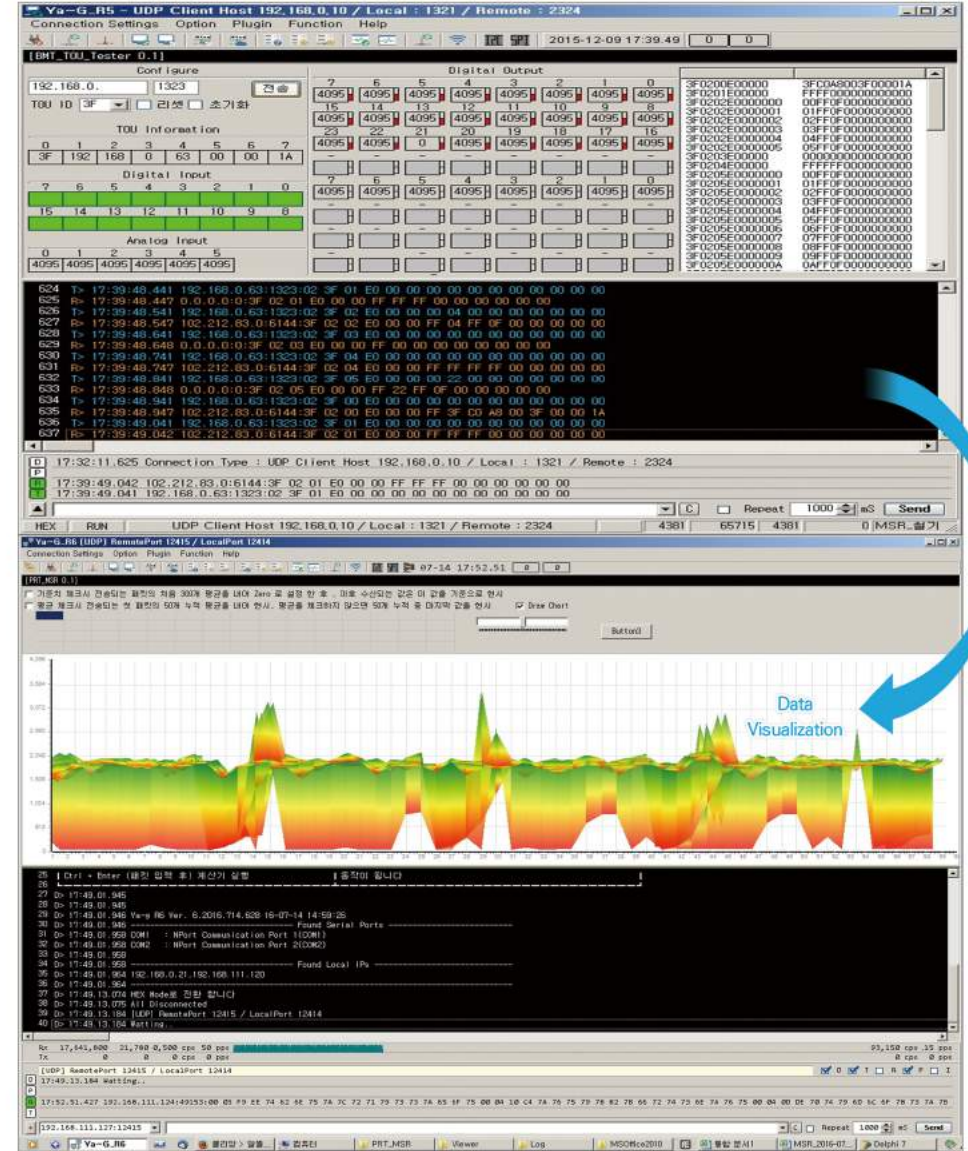
User interaction controllers of software is ATP MMI and Easy user interaction software of Touch CCU MMI products used on Railway rolling stock.



User interaction controller

Communication emulator Ya~G for Packet analysis data

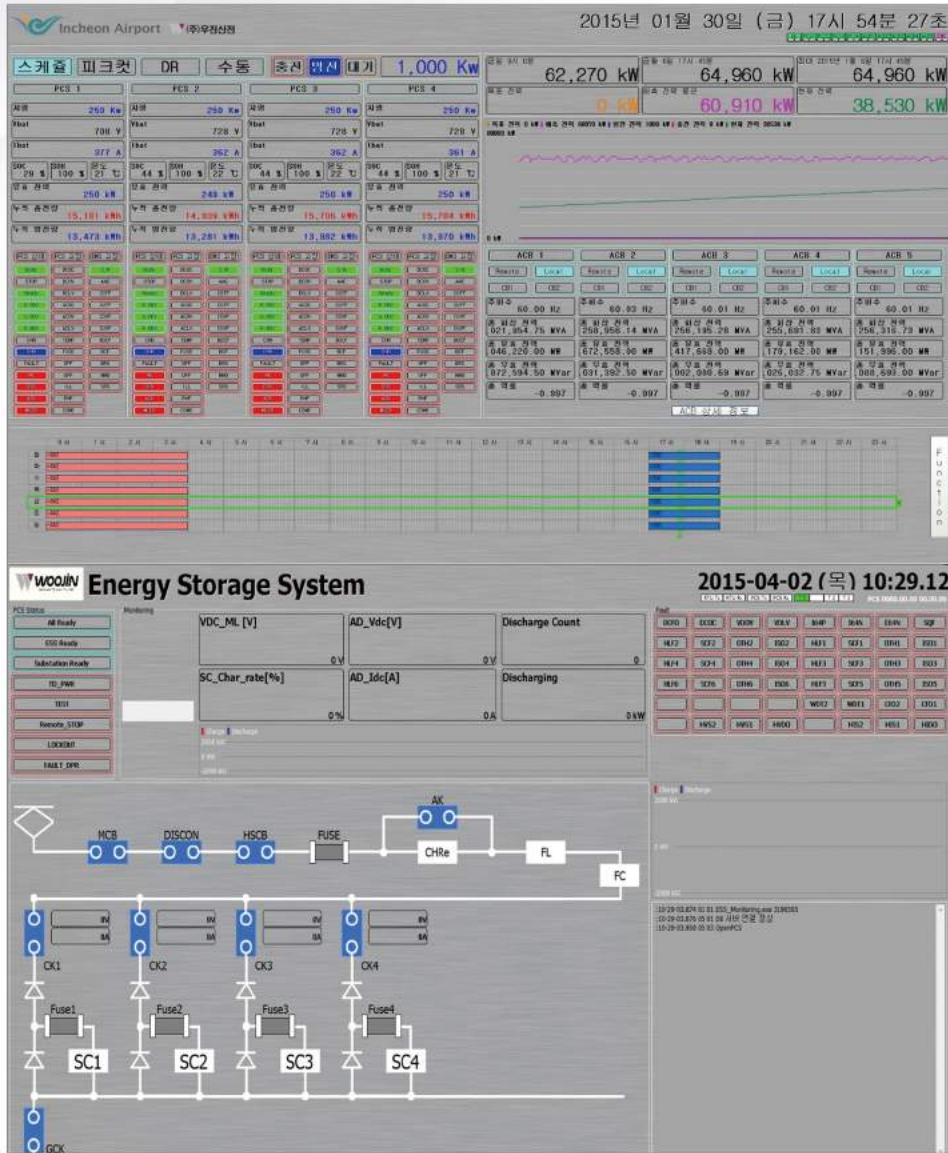
Ya-G software receives and visualizes communication packet analysis data of Serial, Ethernet from Plugin as a tool to analysis communication of Railway rolling stock.



Communication emulator Ya-G

Energy monitoring software using database unit

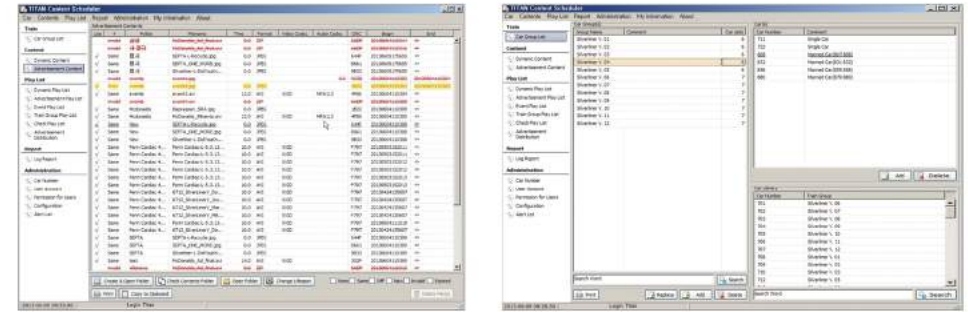
PMS(Power Management System) energy monitoring software that efficiently manages the charging and discharging of the battery.



Energy monitoring software

Contents planning and Management software

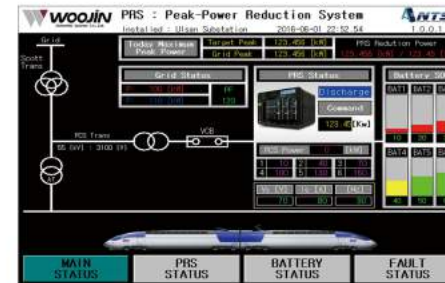
For your convenience, contents planning and management softwares support the plan and manage the PIS, text information of LED/LCD Display, plaing speed, procedure, time of contents etc.



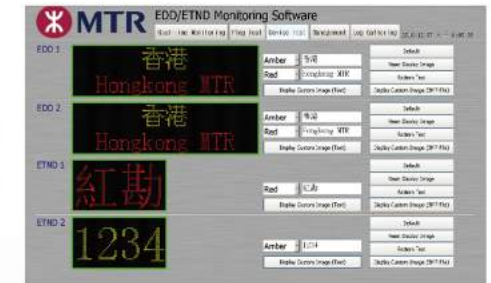
Schedule/contents management

Other application software

- PRS : Peak power reduction software
- MTR MEMS, PTU : Monitoring and Management software



Peak power reduction



MTR MEMS



PTU

III. DISPLAY SOLUTION

Display solution are software platform for management and operation, and hardware platform for storing, remotely transmitting and displaying image information. Video display can be applied in the industrial field, such as outdoor display board for advertising, Kiosk, and display system in transportation.

LED display



Traffic information display board



Bus guide display board

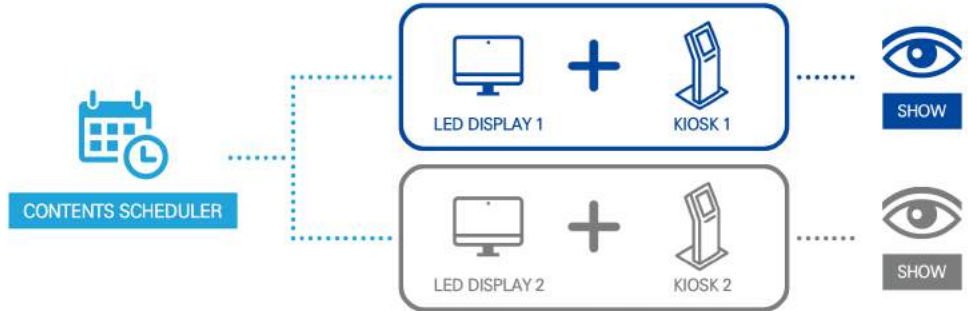
LCD display



DID



Combined Display



Kiosk

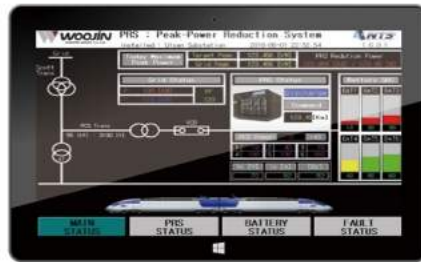


Software platform can implement the basic function such as content playback speed, sequence, schedule, and additional functions according to purpose. Hardware platform consists of devices that store, send, receive, and control video/information. It can be selected as LED/LCD/Combined display depending on purpose and needs.

R&D PERFORMANCE

PROJECT Developed Peak power reduction technology for High-speed train

PERIOD 2012.12.07 ~ 2017.05.20 **53 months**



PROJECT Developed ATP MMI for Electric and Diesel locomotive

PERIOD 2016.04.29 ~ 2019.04.19 **36 months**



PROJECT Developed practical use of Power conversion and Train control monitoring system for 8200 series electric locomotive

PERIOD 2016.04.29 ~ 2019.01.28 **33 months**



PROJECT Developed practical use of SIV for 8200 series electric locomotive

PERIOD 2016.04.29 ~ 2018.09.28 **29 months**



PROJECT Developed ATC Filter Board to SMRT 6 line

PERIOD 2017.02.01 ~ 2017.12.31 **11 months**



PROJECT Developed Tachometer for ATC(automatic train controller)

PERIOD 2018.01.01 ~ 2019.12.31 **24 months**

SUPPLIERS&CUSTOMERS



ANTS Business Part



Based on the technical expertise in the IT Field, we provide electrical equipment for Railway rolling stock



Provides User operation control, emulator and Energy monitoring software for Operation of Railway rolling stock



Provides software platform for Content management and Hardware platform to store, transmit and Display video