STAKEHOLDER WORKSHOP
PWTC
19th October 2011

POWER QUALITY BASELINE STUDY FOR PENINSULAR MALAYSIA

by

DATARAN BERLIAN SDN BHD

1

Presentation Outline

- Introduction
- Structure of RESMOS
- Features of RESMOS
- RESMOS data file

2

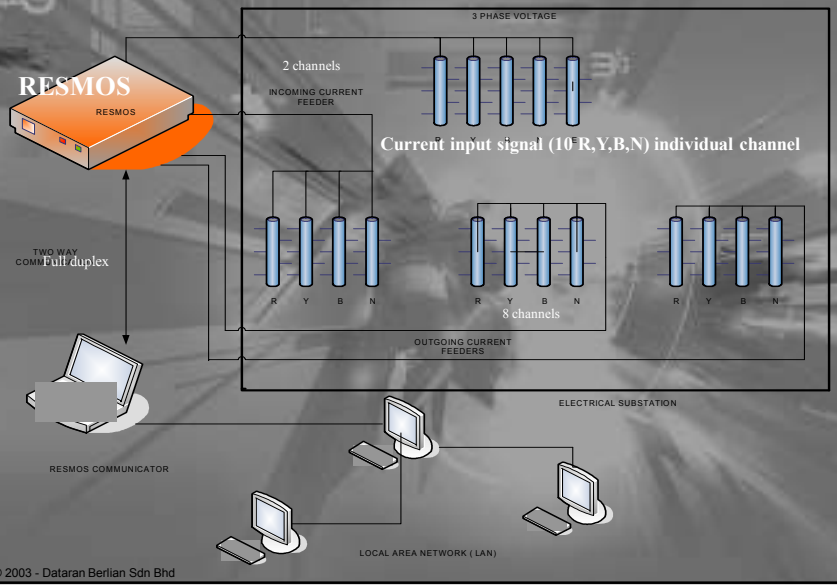
Introduction

A compact industrial standard computer control A TURE multi-channel Data Logging System designed to operate in a harsh environment area which works like a paperless recorder, storing data in memory at a rate and over a length of time you specify for Power Industries.

Research Collaboration with..

- Professor Khalid Mohamed Nor
  - B.Eng.(L'pool), M.Sc, P.Hd(UMIST), SMIEEE
  - Power system expert
  - Provide consultancy & supervisions on development of RESMOS
- UM Electrical Engineering
  - Provide staff, test tools & facilities.
  - Consultancy on international Standards Compliance to IEC 51000 series.
- UTM Electrical Engineering
  - Provide staff, test tools & facilities.

FLOW STRUCTURE RESMOS MASTER PORTABLE UNIT



5

FEATURES

- Fully PC/AT compatible and computerized system control
- All weather operations
- Operating Temperature up to 55°C
- Self-powered
- Portability- Compact all-in-one design for easy transportation and handling
- Simultaneous Data Capturing up to 10 individual Cables (RYBN)
- Harmonic measuring capabilities including it's Neutral up to 21st level for both individual and THD
- In cooperated with Surge Protection capability

6

CALIBRATION

HC 6030

CT-1700

MS IEC 60950-1:2003 & IEC 60950-1:2001

Complied with the safety requirements conducted according to standard MS IEC 60950-1:2003 and IEC 60950-1:2001.

IP 54

IP-International Protection

5-Full protection against contact. Protection against interior injurious dust deposits

4-Protection against splashed water from all directions

9

Patented 2002

10

CURRENT PROBES

Range (A)	Application	Output to input ratio	Frequency range	Manufacturer
4 - 600	Outgoing feeders	1mA AC/ A AC	48Hz-1 kHz	CHAUVIN ARNOUX
100 mA - 1000	Incoming feeders	1mA AC/ A AC	30 Hz-5 kHz	CHAUVIN ARNOUX
100 mA - 3600	Incoming feeders	1mA AC/ A AC	30 Hz-5 kHz	CHAUVIN ARNOUX



P/E

Indoor

F/P

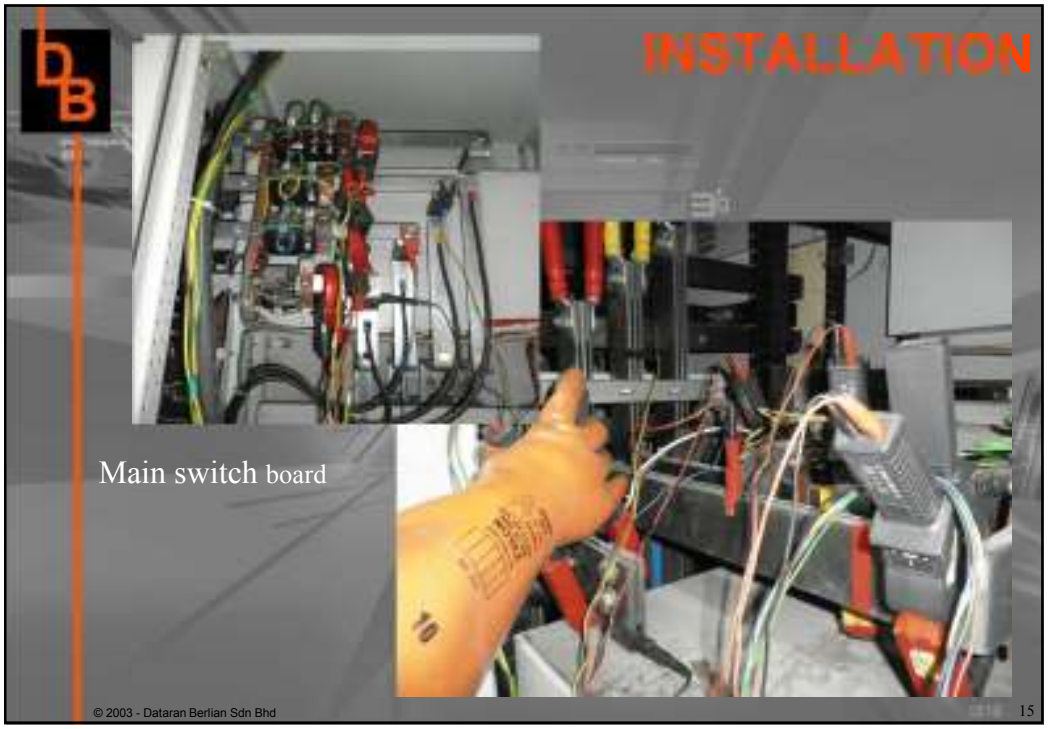
Compact

Feeder pillar

13

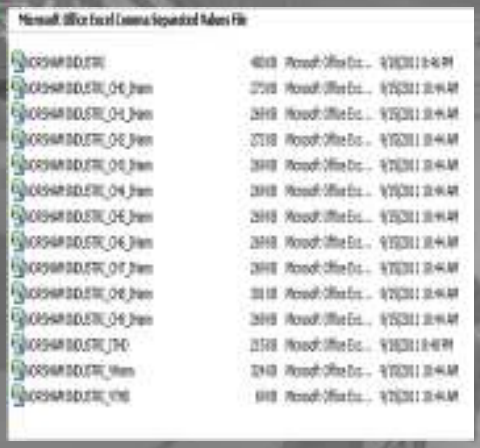
H POLE

14


INSTALLATION
Main switch board
© 2003 - Dataran Berlian Sdn Bhd
15


INSTALLATION
© 2003 - Dataran Berlian Sdn Bhd
16

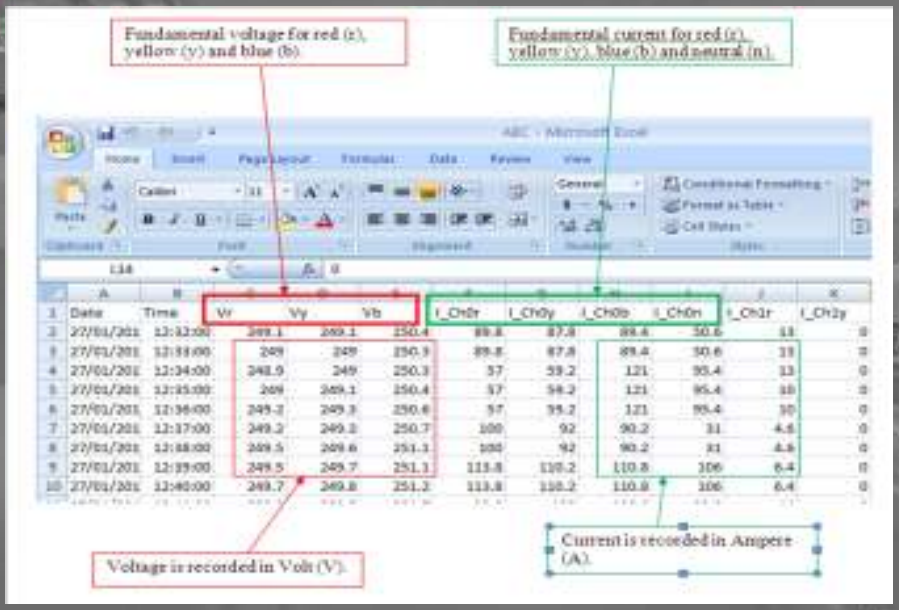
HARMONIC FILES



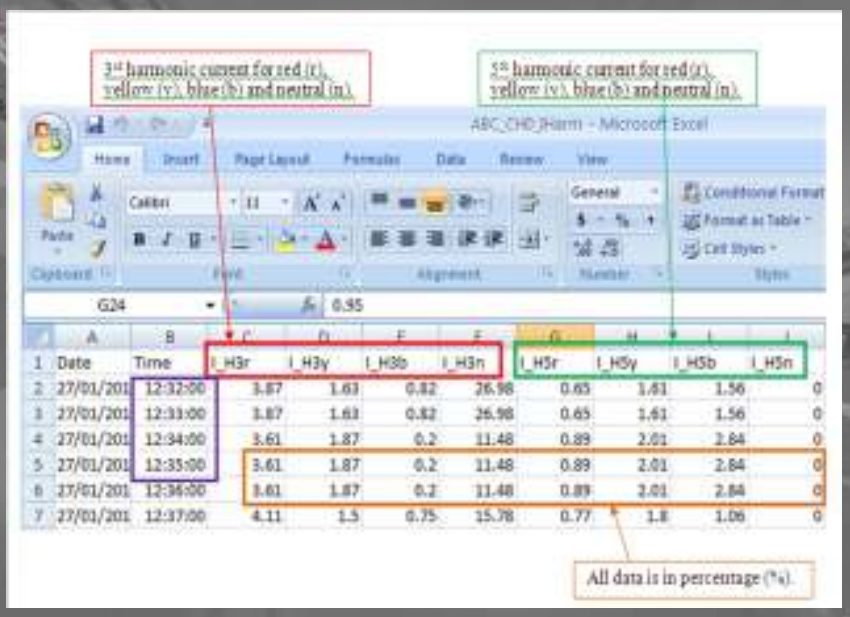
-csv format database:-

1. Fundamental data (V,I, true PF)
1. 10 individual current harmonic percentage (R,Y,B,N) up to 21st level & its THD value
2. Voltage harmonic percentage (RN,YN,BN) up to 21st level & its THD for both single phase & three phase

Fundamental data file

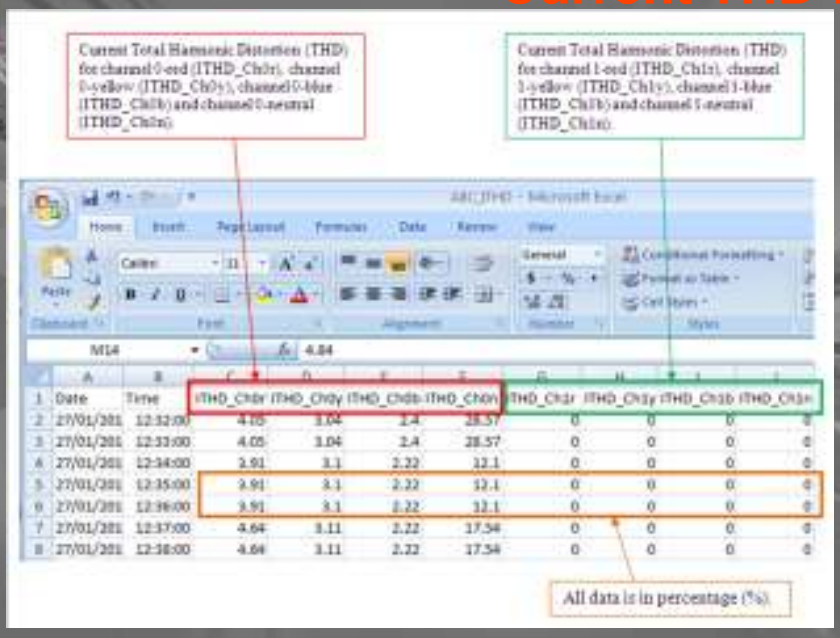


Current harmonic file



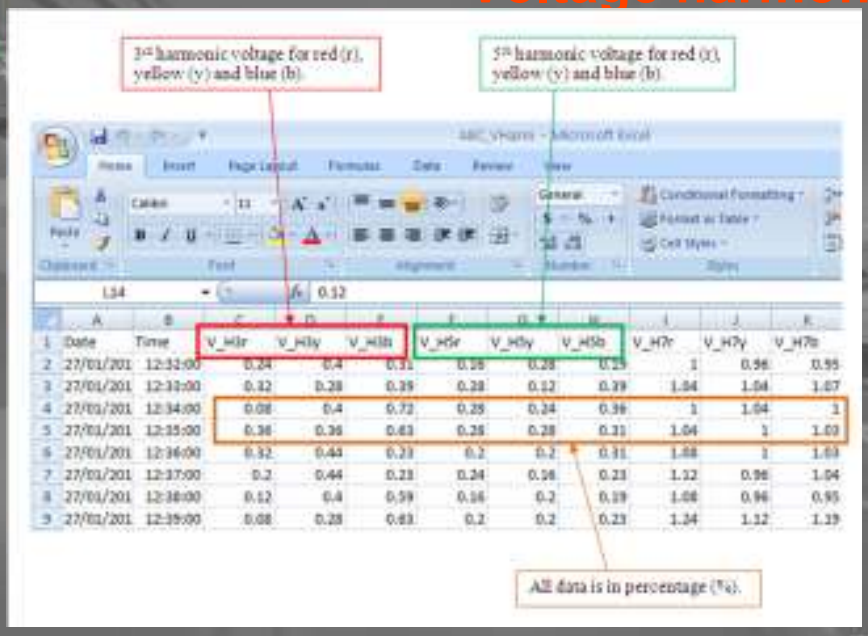
© 2003 - Dataran Berlian Sdn Bhd 19

Current THD file



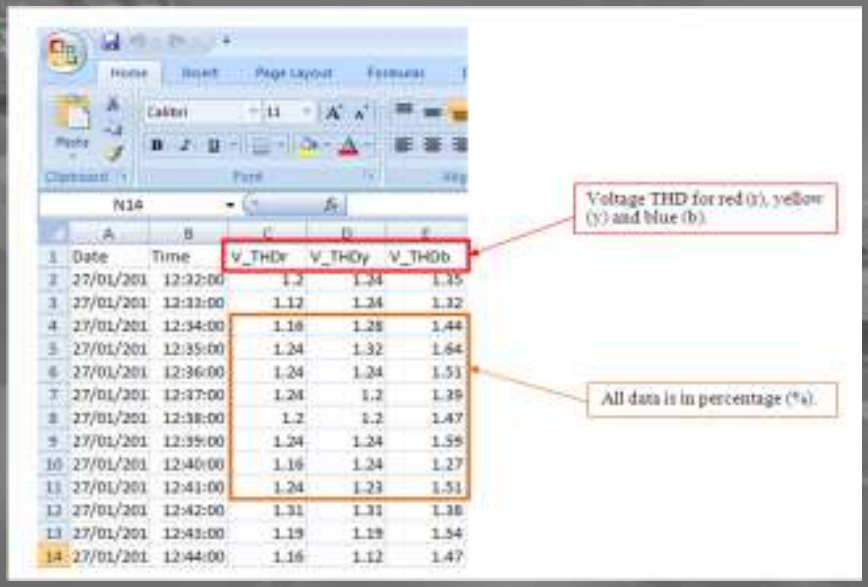
© 2003 - Dataran Berlian Sdn Bhd 20

Voltage harmonic

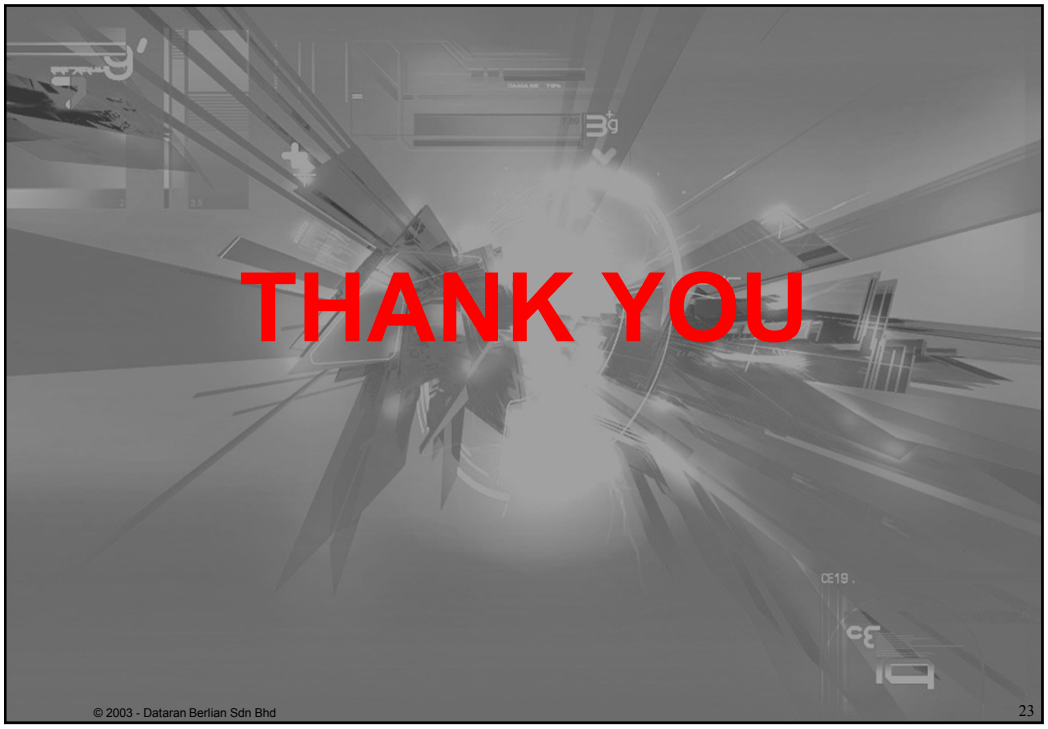


Date	Time	V_H3r	V_H3y	V_H3b	V_H5r	V_H5y	V_H5b	V_H7r	V_H7y	V_H7b
27/01/201	12:32:00	0.24	0.4	0.31	0.16	0.28	0.23	1	0.96	0.95
27/01/201	12:33:00	0.32	0.28	0.39	0.28	0.12	0.39	1.04	1.04	1.07
27/01/201	12:34:00	0.08	0.4	0.72	0.28	0.24	0.36	1	1.04	1
27/01/201	12:35:00	0.36	0.36	0.63	0.28	0.28	0.31	1.04	1	1.03
27/01/201	12:36:00	0.32	0.44	0.23	0.2	0.2	0.31	1.08	1	1.03
27/01/201	12:37:00	0.2	0.44	0.23	0.24	0.16	0.23	1.12	0.96	1.04
27/01/201	12:38:00	0.12	0.4	0.59	0.16	0.2	0.19	1.08	0.96	0.95
27/01/201	12:39:00	0.08	0.28	0.63	0.2	0.2	0.23	1.24	1.12	1.19

Voltage THD



Date	Time	V_THDr	V_THDy	V_THDb
27/01/201	12:32:00	1.2	1.24	1.35
27/01/201	12:33:00	1.12	1.24	1.32
27/01/201	12:34:00	1.16	1.28	1.44
27/01/201	12:35:00	1.24	1.32	1.64
27/01/201	12:36:00	1.24	1.24	1.51
27/01/201	12:37:00	1.24	1.2	1.39
27/01/201	12:38:00	1.2	1.2	1.47
27/01/201	12:39:00	1.24	1.24	1.59
27/01/201	12:40:00	1.16	1.24	1.27
27/01/201	12:41:00	1.24	1.23	1.51
27/01/201	12:42:00	1.31	1.31	1.38
27/01/201	12:43:00	1.19	1.19	1.54
27/01/201	12:44:00	1.16	1.12	1.47


THANK YOU
© 2003 - Dataran Berlian Sdn Bhd
23