

CMS Computers Ltd

an ISO 9001-2000 company for manufacturing and services

Welcomes you to the

PRESENTATION

Winning Thr'u Values

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Winning Thr'u Values

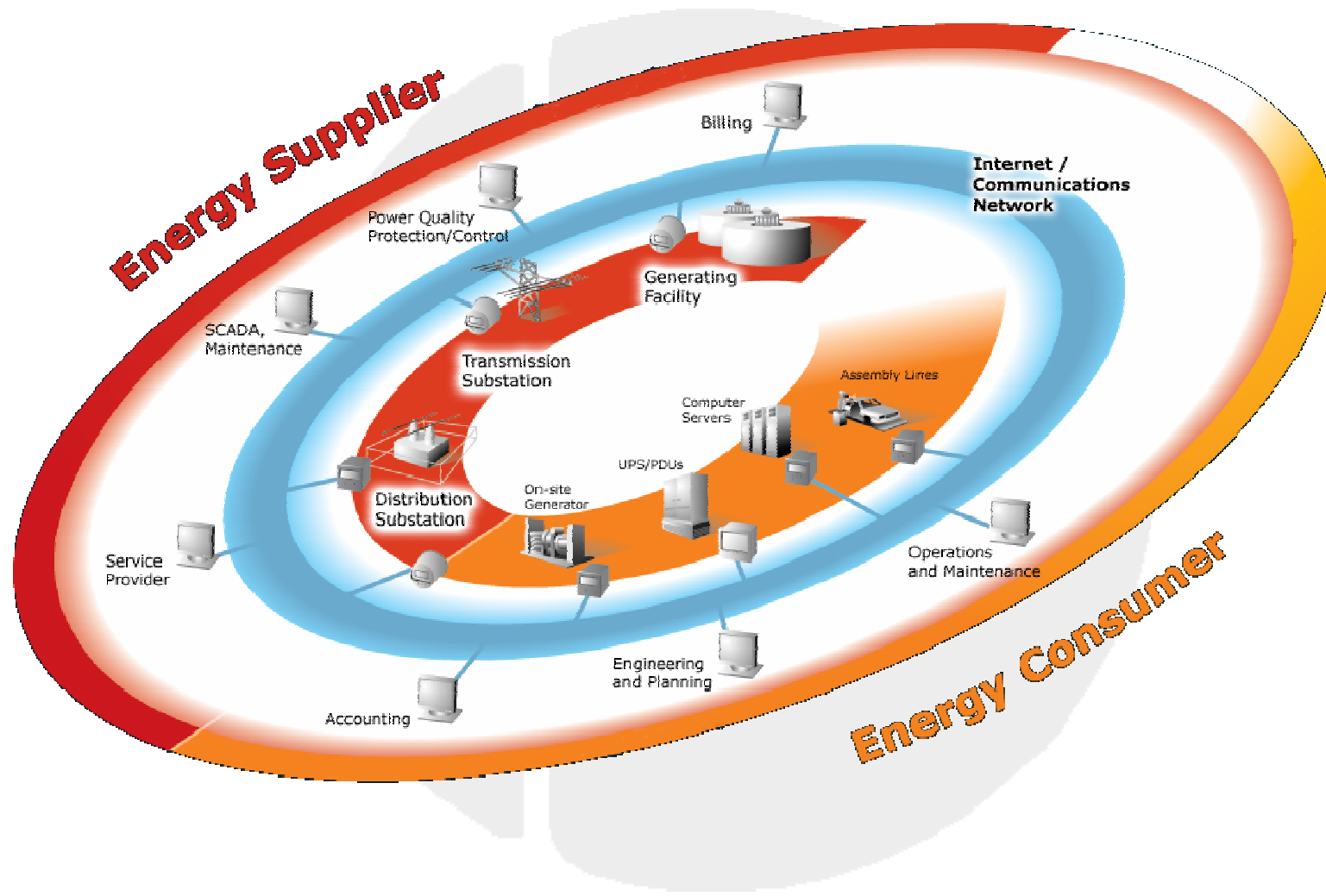
CMS Energy Management Systems



**Marketing, Engineering and System Integration of
technology-driven, futuristic products in the field
of Energy Management & Supervisory Control**

Winning Thr'u Values

Automation Solutions for



Winning Thr'u Values

Turnkey Solutions



- Energy Management Systems
- ABT Metering Systems
- Supervisory Control And Data Acquisition (SCADA) Systems
- Substation Automation Systems

Let us look at



- Real time analysis
- AMR
- Power Quality monitoring
- Revenue protection

Real time analysis



- Electricity is generated, transmitted and consumed in real time

.....Manage it in real time

Real time analysis



- This requires a system that integrates the generating stations, LDCs and Distribution systems.
- We need to have a integration of the total power supply chain
- We need a most powerful system to do this

Real time analysis



- ABT metering system or management system?
- The ABT system should provide scope for getting the incentives and avoid penalties in real time.
- What we lost cannot be recovered. solution required in real time.

Real time analysis



- Enterprise Energy Management is the solution for this.
- It provides the required information in real time to the operators of the utilities on what to do for the remaining time block to achieve the target.

Real time analysis



WIN Data - guest - [User Diagram: IPT_Man] File Edit Options View Window Help

The ABT System

Bus Freq: **49.98** Bus Voltage: **400**

	BUS 1	BUS 2	BUS 3	BUS 4	BUS 5	BUS 6
MW	323	350	314	190	420	360
MVAR	23	30	21	4	1	3
GEN						

Total MU's: **15.44** MW Net Export: **1957**

Time Block:	32	Average Gen:	1951.56	Asking Rate SG:	1930	% DC up to PB:	40.23
Scheduled Gen:	1934	Freq Avg:	49.69	Desired BLK Gen:	1942	% SG up to PB:	40.23
Declared Cap:	1934	UI MW:	17.56	Desired Gen to achieve 101% in a day:	1954	UI Cost Lacks:	10.2
						UI Net:	7.3

< 100 : **2** 100 **4** 101 **15** 105 **0**

102 **10** 103 **0** 104 **0**

10:40 AM

AMR



- Energy Billing and revenue collection a big challenge.
- Utilities are keep trying various options.
- AMR is the ultimate solution for both billing and substation monitoring

AMR

- Energy IT industries offer various modes of acquiring data thro AMR.
- It requires Energy meters with industry standard protocol and not depend on the manufacturer alone.
- The system should be fast, reliable and maintenance free

AMR

- Various communication options available like.....
- PSTN Modems
- GSM, GPRS,
- CDPD Wireless
- Wireless systems
- Vsat
- Fibre /LAN
- And importantly.....

AMR

- PLC based communication systems – An ideal solution for LT distribution network
- Easy to install
- Option with control
- Suitable for systems which are very complex to network

Power Quality

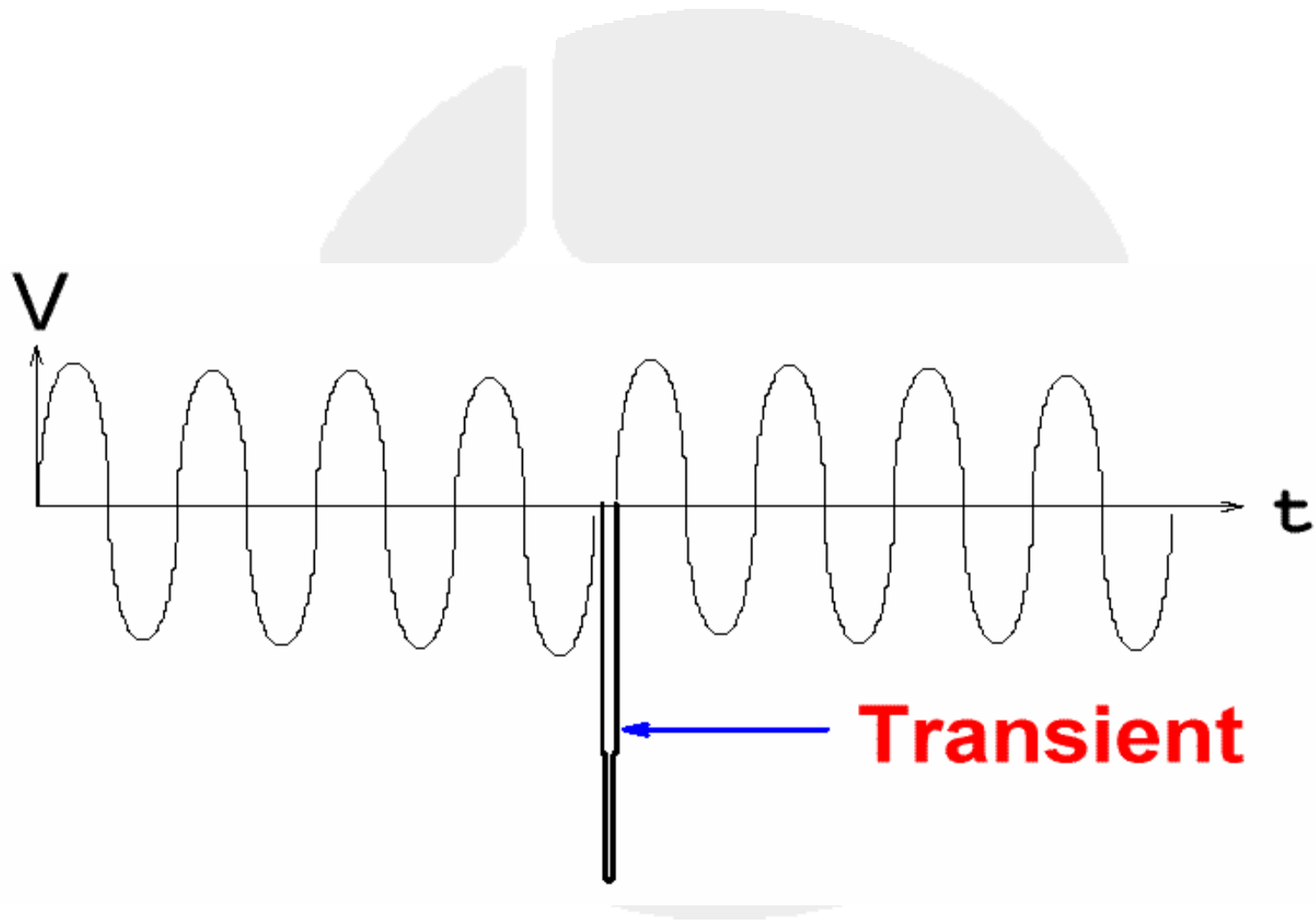


- Meter that integrates energy accounting and power quality monitoring
- Power quality audits give less results compared to online analysis especially to analyse the effect of transients, sags/swells etc.

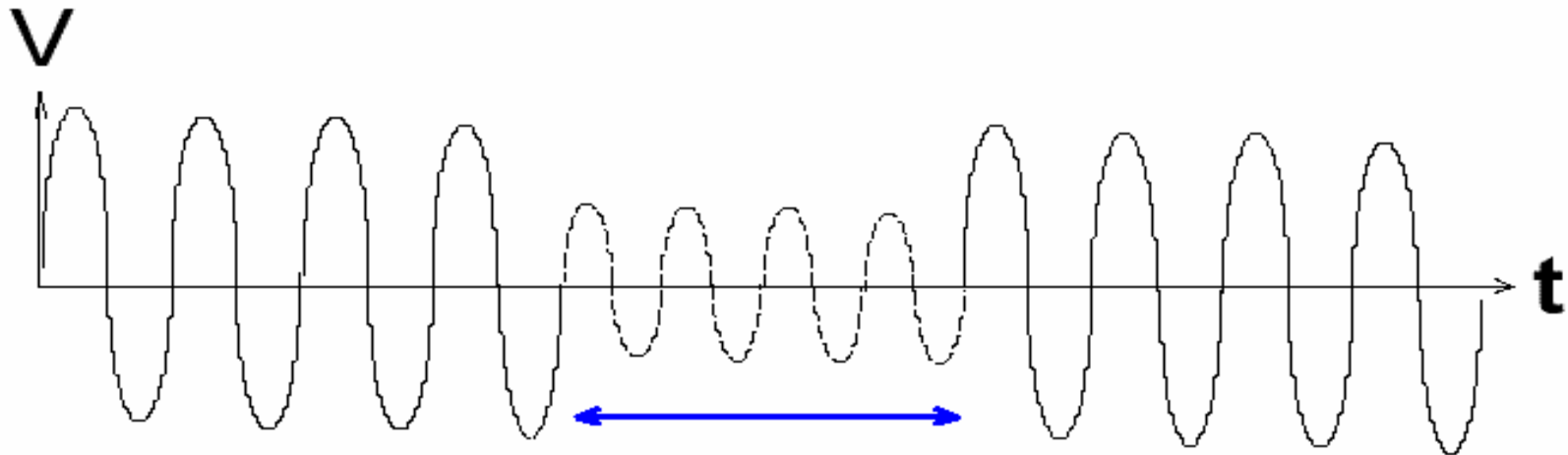
Power Quality



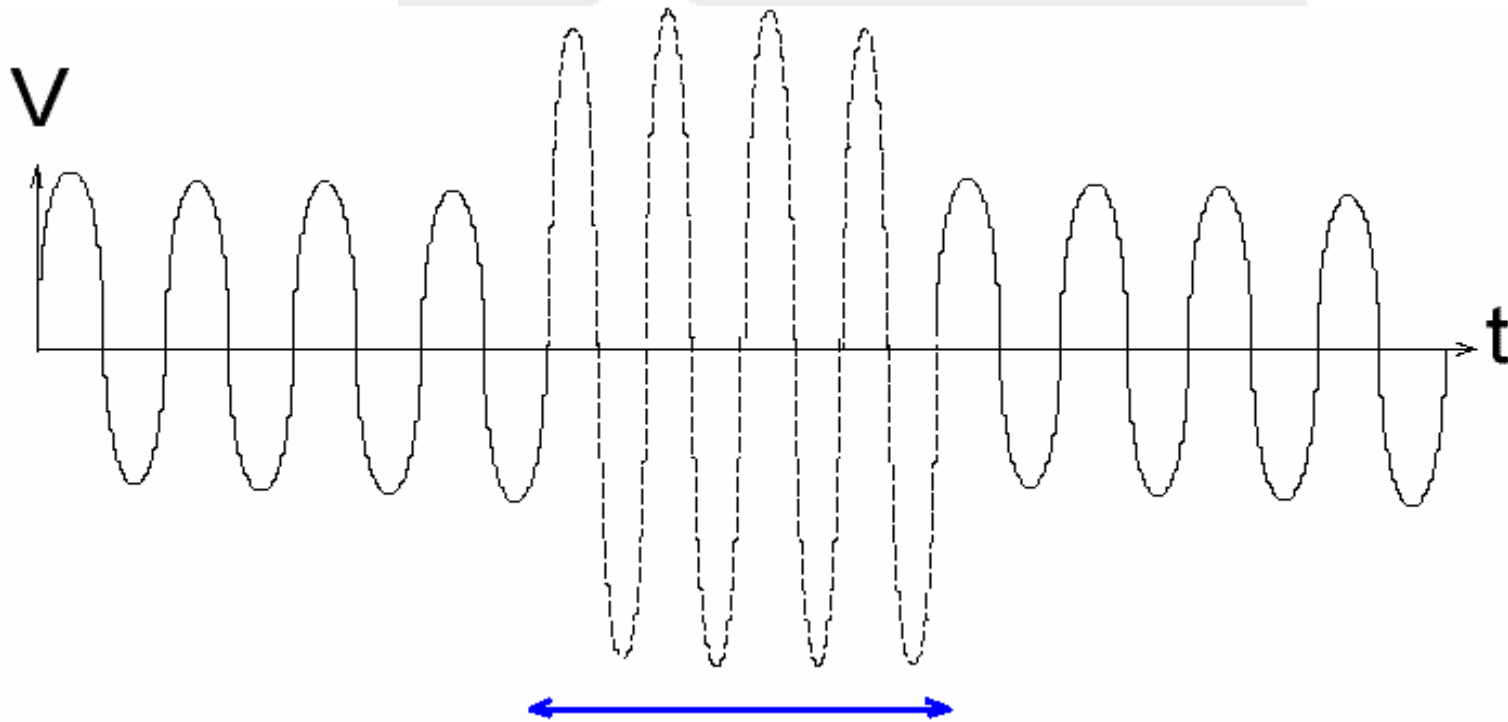
- Transients
- Sags/Swells
- Harmonics
- Flicker
- Voltage imbalance
- Load interactions
- Grounding errors
- Electrical system design and construction errors



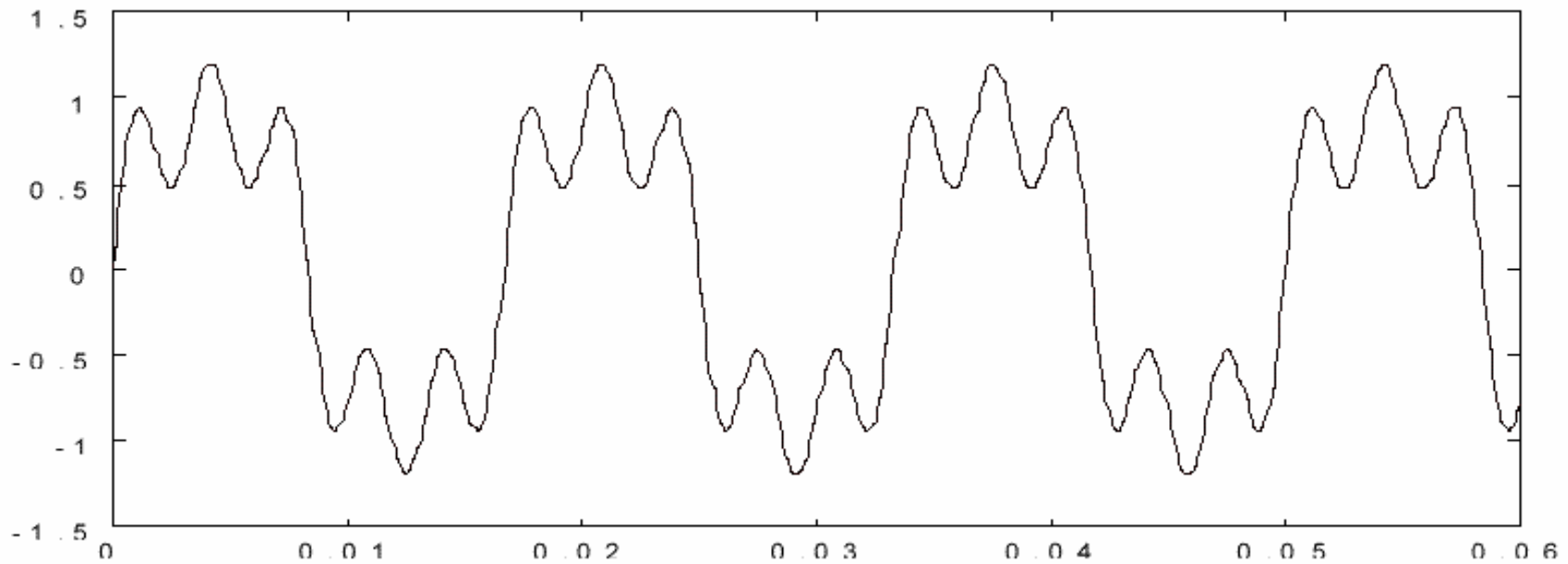
Voltage Sags (Dips)



Voltage Swells



Harmonic Distortion



PQ monitoring



- Meter should have capability to capture all the above events
- Should have data and waveform logging capability
- Should support Ethernet communication port for bulk data down load from the meter to software
- Requires a very high sampling rate of as high as 1024 samples per cycle

Revenue protection



- Theft control
- Meters with control capabilities
- Modern Bill pay methods
-importantly

Revenue protection



- Prepaid metering methods with control option
- A very successful method in cellular phone industry
- Brings in discipline in Energy consumption
- Demand supply gap will reduce drastically
- Utilities enjoy the timely collection of revenue

Contact



- CMS Computers Limited
- 09381101150
- cmsems@cms.com