Ugu District Municipality

ICT Summit Presentation on SCADA and Telemetry

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SCADA

- SCADA is an acronym for SUPERVISORY CONTROL AND DATA AQUSITION.
- For SCADA to be functional you will need :-
- Telemetry: telemetry is the process of recording and transmitting the readings of that particular instrument (in this case we measure levels)
- In order to be able to transmit these readings you need to have a network and addresses of each site you communicate with.
- The telecommunication network and the frequency to use is obtained from ICASA.
- Master Station: It collect all the field data and sends it to SCADA.

Telemetry

- Adroit software is used to design what we want to measure in a form of mimics.
- Mimics are the pictures of reservoirs and pumps that are represented on a computer for monitoring.
- This software allows you to create alarms in case of unauthorised events.
- You can also stop/start the pumps remotely using this software

Control Centre monitoring the telemetry

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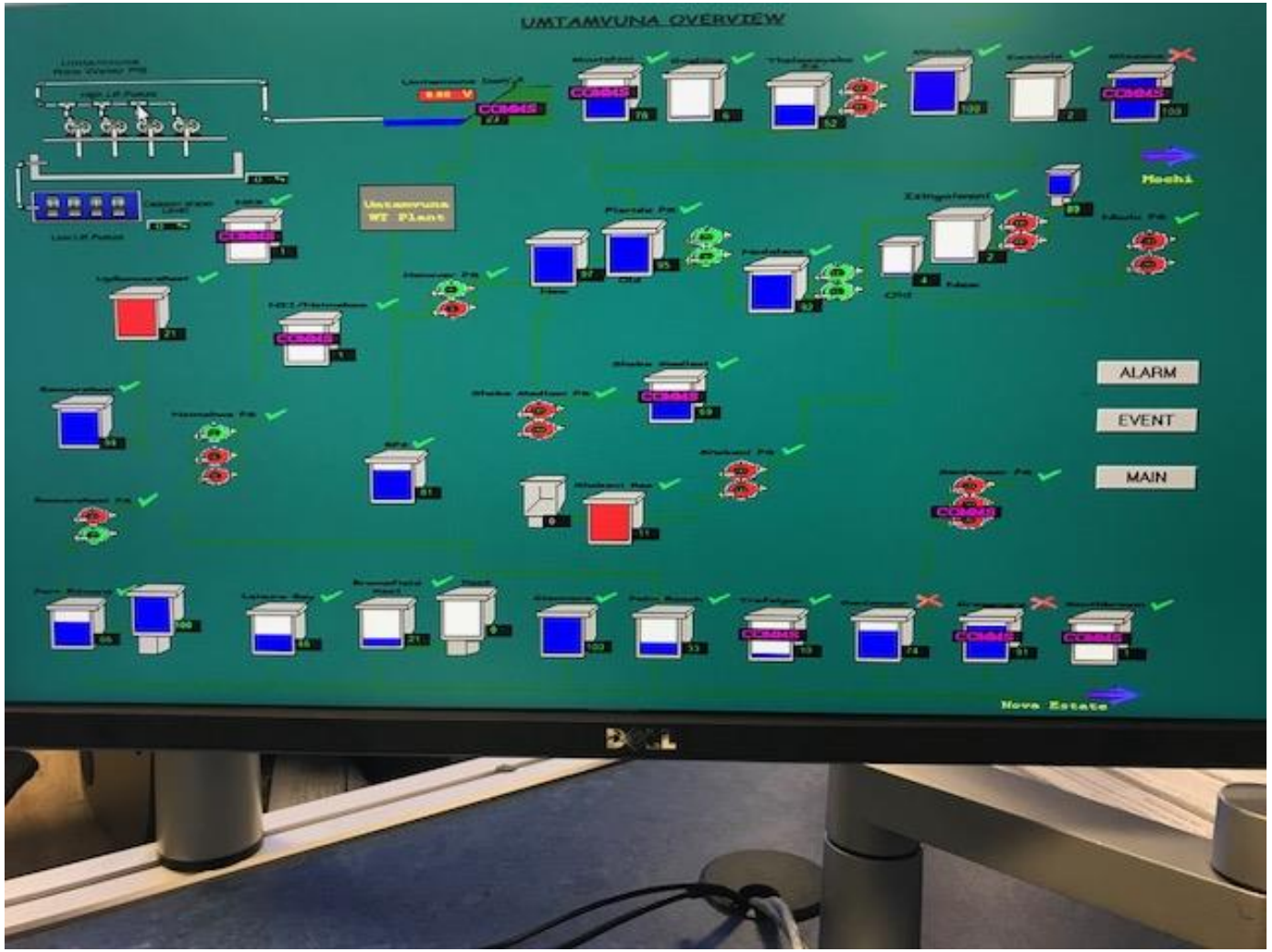
Overview of a water supply system



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Advantages of the SCADA and telemetry system

- Prevent sewage spillage with it alarms SMS function.
- Control Scheduler can easily pick up when a reservoir drops drastically or overflowing.
- Monitoring of pumps
- It gives an overview of the water system across Ugu DM
- It saves historical events and information that has occurred
- It can also generates reports.
- It save a lot of unnecessary call out after hours

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Advantages cont.....

- With a full functional of SCADA and Telemetry it will be easy to balance water on reservoirs.
- It ensures that community has water at all times by starting pumps when reservoirs get low.
- Telemetry can even monitor the valve position.
- It also has a feature were you can open or close the valve remotely.

Challenges experienced with the old system

- Loss in revenue from direct water losses throughout water supply systems.
- Loss of revenue, economy and employment of the community due to lack of water during the peak tourism periods.
- Intermittent water supply over prolonged periods.
- Sewerage overflows resulting in water poisoning and environmental damages.
- Lack of compliance for Blue and Green drop status.
- Equipment failure in field, mostly instrumentation.

Challenges cont…

- Some sub systems were never operational since completion.
- The old SCADA and telemetry system no longer reliable and outdated.
- The old system also did not meet the ICASA requirements

Planned outcome of the current project

- Minimised loss of revenue due to water system leaks and wastage.
- Increasing water availability the community and customers.
- Minimal or no sewer overflows.
- Compliance with the Blue Drop, Green drop and No Drop requirements
- Proactive maintenance and decreased breakdowns.

Team responsible for the telemetry

- 2 x Instrumentation Technicians
- 2 x Artisans
- Schedulers at the Control Centre
- ICT

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