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SCAD Scans

When looking at Supervisory Control And Data Acquisition (SCAD) systems they are very similar to the working of smart devices, they have scanners for the system that they're being used for and they send information to make a decision (1). SCAD eliminate the human factor in information gathering, which can lead to more accurate data in the system allowing people to make more informed decisions on what they should do (3). The main difference between SCAD and smart devices is the use of sending information over the Internet (2). SCAD does helps develop infrastructure, but there are still things in which people should be wary of when coming to SCADA.

The main uses for SCADA is helping humans do things such as farming, factory work, and home surveillance (1).. This is due to the different scanners that are able to constantly view things such as pH, temperature, humidity, etc. This would normally need multiple humans to observe and track information which would need to be relayed to the operator for information. Things that might need for machines to shut down, in which SCADA systems can observe and safely shut off, where humans might shut they systems down half way which can be more dangerous for maintenance (3). While SCADA systems can be very helpful in the idea of humans there are some downsides to consider.

SCADA does have strengths such as running on a closed system, but there are possible downsides such as being physically vulnerable or needing constant power. SCADA doesn't use the Internet and in on a closed system which makes it more secure on the digital side. There is less need for the human interaction in the system which can cut down on the human costs or the cost of the mistakes they can make (3). The implications and upkeep can be very expensive, mainly in the idea of powering the systems and making sure all the physical equipment are fully functioning. Some problems in which SCADA may encounter are being weak physically, as there aren't always security measures in place to protect the Human Machine Interface (HMI) (4). Another would be how power needs to constantly being directed to all of the devices for data to be sent and gathered (2).

SCADA can help companies with human made problems for the most part in cut down in human costs, but there are possible problems with physical security with how open parts of the system can be with the public. SCADA allows more information to make informed decisions over what humans could possible gather in the same amount of time as for the scanners allow for data gathering in seconds. The cost between powering the systems and possible skilled labor makes SCADA more appealing to companies.

References

1.

https://docs.google.com/presentation/d/1lB2dMFBXx2SmUyxwB8YvOWho4s_BCWmyK1bPjAxyUqc/edit#slide=id.p20

2.

Intelligent energy management based on SCADA system in a real Microgrid for smart building applications

Energy management is one of the main challenges in Microgrids (MGs) applied to Smart Buildings (SBs). Hence, more studies are indispensable to conside…

3.

StackPath

4.

SCADA Systems

From http://www.scadasystems.net Supervisory control and data acquisition – SCADA refers to ICS (industrial control systems) used to control infrastructure processes (water treatment, wastewater treatment, gas pipelines, wind farms, etc), facility-based processes (airports, space stations, ships,...

Google Doc

Assignment Details

GRADE

LAST GRADED ATTEMPT

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ATTEMPT (LATE)

3/23/22 9:04 PM

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Submission

- *Submission Text*

Comments

Feedback to Learner

3/29/22 10:54 AM

3 days late -3

OTW, nice work.