

Monitoring COVID-19 on the smart grid

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Might smart grid technologies be used to monitor the spread of the coronavirus, SARS-CoV-2, the pathogen that causes COVID-19? Researchers in Morocco, writing in the *International Journal of Security and Networks* put the case.

From the first identification of an emergent virus in late 2019, through the pronouncement of its pandemic status in March 2020, and on through lockdowns, social distancing, vaccination programs and beyond, technology has underpinned our response. Artificial intelligence, the internet, information & [communications technology](#), [big data](#), the [internet of things](#), as well as the vast resources of medical science and healthcare have provided the tools to cope with the pandemic. Of course, there are huge inequalities within nations and internationally. As such, there is a need to find ways to redirect a given technology to the needy in those places where other technology may be wholly inaccessible.

The [smart grid](#) could see the implementation of communication technologies through millions of electrical connections to the conventional power grid. Essentially, the potential of the smart grid is to connect everybody in a region who has a smart meter with an added platform to extend its functionality. This connectivity could go way beyond [internet connectivity](#), which despite the received wisdom is not yet ubiquitous.

El Yazid Dari of Abdelmalek Essaadi University, Ahmed Bendahmane of Abdelmalek Essaadi University, both in Tetuan, and Mohamed Essaaidi of Mohamed V University in Rabat, explain how smart grid technology might be used to identify new clusters of COVID-19 cases as the pandemic continues. Remote monitoring might allow us to predict the spread of the virus and so apply a more localized response to a given region. With such information to hand, we could help protect the people who live there and perhaps even preclude the wider spread of the virus from a given cluster.

"Major symptoms related to COVID-19 can be telemonitored using smart grid technology such as temperature, dry cough, dyspnea, and pneumonia that a person can test, measure and verify at home without traveling to the hospital," the team writes. The results could be sent via

the smart grid to the healthcare authorities. Additionally, the results from home test kits for asymptomatic infection might also be shared with those authorities for even broader remote monitoring.

More information: El Yazid Dari et al, A novel approach for COVID-19 outbreak spread monitoring and control using smart grid technology, *International Journal of Security and Networks* (2021). [DOI: 10.1504/IJSN.2021.116776](https://doi.org/10.1504/IJSN.2021.116776)

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