

Pandemics, Homeworking and the Security of Voice Computing

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Abstract:

Voice computing continues to revolutionise the way we interact with technology and the world. Voice assistants on our phones, in our vehicles and in our homes have brought great benefits in terms of usability and accessibility.

During the last 12 months in response to the COVID19 pandemic, many people have moved to a homeworking pattern and remote working is set to become a more common feature of the working environment as companies have accelerated digital transformation programmes that facilitate flexible working. Many organisations have allowed homeworking during the pandemic that has included tasks thought previously to be too sensitive from a security perspective and corporate risk appetites have had to change due to the constraints of lockdowns and the health risks of travel.

In this paper the authors look at the impact of working from home in close proximity to consumer voice computing, how it is being used and how threats to voice computing security could impact not only individuals but also the organisations they work for. In particular the experimental and theoretical research carried out so far includes a threat model for audio-based computing and outlines what future developments will mitigate the identified threats. Finally, some observations will be shared on what simple measures can be taken to improve security when homeworking in proximity of smart speakers, mobile phones and other audio-based computer systems.