

'Wireless spectres — Space and the re-enchantment of invisible technologies'.

This thesis examines wireless technologies, and the way they are integrated in architecture to produce new spatial experiences.

The thesis draws from the school of New Materialism in suggesting that the materiality of wireless infrastructure is not a fixed property that can be captured and revealed, but that is rather contingent on transactions with other materials and through human interaction. Measuring and representing wireless involves a series of transactions — the construction of a probe to measure signal strength, logical processes involved in the transformation of values into visible patterns, and a choreography of movement as the probe is deployed in space. Following notions of agential realism and digital materiality, I propose that these transactions *construct* the materiality of wireless, and aim to position the process of representation as a form of speculative design which deals with the emergent materialities of wireless. In this context, representations do not increase literacy, but rather allow us to think of wireless infrastructure in ways which go beyond the convenient transfer of information to think of them as ways of creating new spatial experiences.

The thesis develops a creative practice approach that adapts tools and techniques developed in explorations by others to engage with the material transactions in representing wireless. I trace historical precedent through the notion of spectres, which emerged in the 19th century as a result of the introduction of the first generation of wireless technologies for telegraphy and radio broadcast. The exploration results in a body of work comprising instruments, photographs and installations which constitute allusive images aimed at contributing renewed notions of how wireless can be integrated in the design of artefacts and spaces