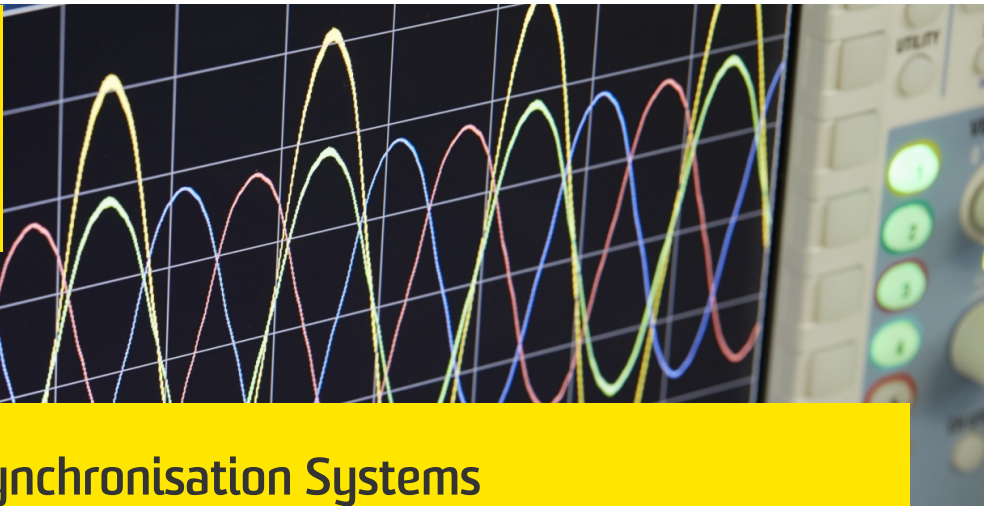




UNSW
SYDNEY



Microgrid-Grid Resynchronisation Systems

A resynchronisation system has been developed to bring the voltage, phase and frequency of a microgrid back into alignment with the main grid in the event of a fault on the distribution line.

Competitive advantage

- A ground-breaking system that can optimise the load by either minimising the time, or the energy needed, to resynchronise
- Innovative solution that includes microgrid interrogation to determine load diversity, the optimisation of the process of synchronisation to achieve low energy cost, or produce a rapid response

Impact

- The algorithm decides which way to push the voltage amplitude, frequency and phase in order to minimise the time or the energy needed to resynchronise the microgrid, based on the estimate of load and generation types.

Successful outcomes

- Tyree microgrid project
- Lanka Electrical Company, Sri Lanka

Capabilities and facilities

- 25kVA experimental microgrid with diverse set of loads and generators
- 18 rack RTDS capable of modelling microgrid hardware
- OPAL-RT real-time simulator

Our partners

- A. W. Tyree Foundation
- ARENA
- Asian Development Bank

More Information

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