NB-IoT and Its Suitability for Smart Grids

Time：107/2/27（Tue.）14：30~16：00

Location：NCTU Engineering building 4 ED816

Speaker：Zhang Haibin
Senior Scientist（TNO）
Management committee member
（COST ACTION IRACON）

Abstract：

This presentation gives an overview of Cellular Narrowband Internet-of-Things (NB-IoT) technology, and discloses a recent assessment of the suitability of using NB-IoT for smart grids applications. An overview is first given with regard to the standardization status, and key technical components of NB-IoT. Secondly, for the suitability assessment, we will in particular focus on the reliable and timely delivery of Outage Restoration & Management (ORM) messages at the event of a local or regional power outage, which is one of most demanding smart grids applications. Using system-level simulations and modelling of both the cellular NB-IoT and the energy distribution networks, an extensive sensitivity analysis of the ORM service performance will be presented w.r.t. various radio network configurations. Key outcome of the study is the conclusion that indeed NB-IoT is a suitable technology for supporting ORM services in smart grids, accompanied with a proposed near-optimal radio network configuration to best do so.

主辦單位：交大-IBM智慧物聯網巨量資料分析研發中心

協辦單位：聯傑國際股份有限公司