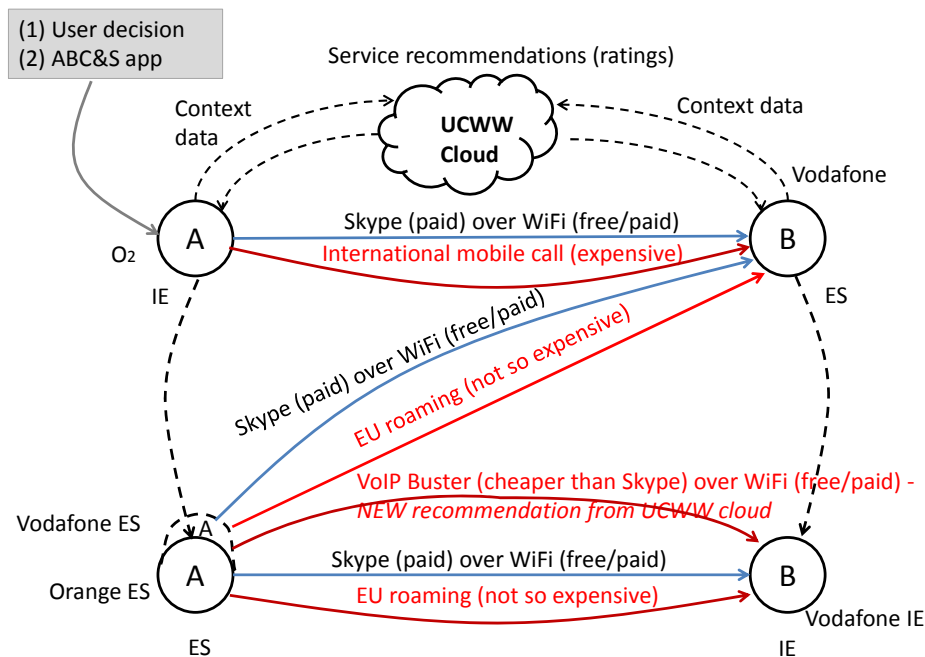


## UCWW Cloud-based ABC&S Mobile App

Ivan Ganchev, Zhanlin Ji, and Máirtín O'Droma  
Telecommunications Research Centre (TRC), University of Limerick, Ireland

Ubiquitous Consumer Wireless World (UCWW) encompasses the theoretical foundations directing the enabling infrastructural changes for a radically new wireless environment (O'Droma & Ganchev, *IEEE Communications Magazine*, 48, 2010, pp. 158-165). The radicalness lies in the shift to consumer-centric networking and away from network-centric and subscriber-oriented networking. It is completely in harmony with, and will benefit fully from, almost all the existing global technological development and ongoing standardization efforts in wireless communications.

In the UCWW environment, a cloud-based service recommendation system is advanced as a means for consumers matching their need to discover the 'best' mobile services, and facilitating, and supporting, association with them by following a user-driven 'always best connected and best served' (ABC&S) paradigm. Figure 1 illustrates the operational concept at a high-level design. It shows an example of how a cloud-based ABC&S mobile app – associated with such a system – could be used for finding and recommending to users, or even automatically selecting if the user's profile settings are so set, the 'best' wireless access services in a particular instance from a selection of 3G, 4G, WiFi, and WiMAX offerings and network providers, including in that decision process the user's personal profile requirements, e.g., for high-quality voice call service when the user needs to talk with her/his boss, but free WiFi/VoIP lower-quality call service selection (where possible) for talking with friends in order to save money. The complex functional requirements of the app make for a demanding app design, testing and validation program. The presentation will include a design solution realized through a structured composition of three tiers – a mobile application tier, a web tier and a cloud tier.



**Figure 1.** Example of the functional operation of the UCWW Cloud-based ABC&S Mobile App in finding and recommending to users the 'best' wireless access services, from among various 3G, 4G, WiFi, and WiMAX available offerings.