

行動通訊技術現況與最新發展

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摘要



智慧型手機普及後,行動通訊儼然邁入另一個嶄新的里程碑,它顛覆消費者的使用行為,打破傳統電信與電腦產業的藩籬,也加速相關產業的結合,更進一步蛻變為新的資通訊技術(Information Communication Technology, ICT)產業。在我國啟動第四代行動通訊之際,作者藉本文一隅概述通訊技術演進,並介紹最新行動通訊技術——長程演進技術(Long Term Evolution, LTE)與進階長程演進技術(Long Term Evolution-Advanced, LTE-A)主要功能。同時,也藉由行動通訊領導廠商愛立信(Ericsson)研究報告中的關鍵數據,了解行動通訊現況與用戶的變化趨勢。最後,作者以愛立信在世界行動通訊大會(Mobile World Congress, MWC)所展示的科技演進及歐盟METIS 2020(Mobile and Wireless Communications Enablers for the Twenty-twenty Information Society)研發計畫,期勉大家一起迎向未來的通訊世界——網路型社會(Networked Society)。

關鍵詞:正交分頻多工、多重輸入輸出、長程演進技術、網路型社會、機會 之窗

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前瞻科技與管理 4卷1期,105-161頁(2014年5月) Journal of Advanced Technology and Management Vol.4, No.1, 105-161 (May, 2014)



Mobile Communication Evolution and Trend

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Abstract

With the proliferation of smart phones, mobile communications has entered into a new milestone that drastically changed, consumer behaviors broke the traditional boundaries between telecommunications and computer industries, accelerated the consolidation of related industries, and further transformed into a brand new information and communications technology (ICT) industries. With the advent of fourth generation (4G) mobile communication in the near future, I outlined the evolution of communications technology and the latest mobile communications technology introduction - Long Term Evolution (LTE) and Long Term Evolution - Advanced (LTE-A). In addition, with the support of Ericsson's research reports, this paper also illustrates the current status of global mobile market and user trends. Finally, through the demonstration by Ericsson in Mobile World Congress (MWC) and the EU Mobile and wireless communications Enablers for the Twenty-twenty Information Society (METIS 2020) initiative program, let us embrace the future world of communications - Networked Society.

Keywords: OFDM, MIMO, LTE, networked society, window of opportunity

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