

The technical Requirements of Developing a National Research and Educational Network in Saudi Arabia

After the great success of the Internet in supporting both the industry and academia advancements in the past decade, the academic world has focused again on concept of the research and educational networks (RENs) that have led to the creation of the Internet. Indeed, the RENs continue to play a vital role in promoting the research activities and fostering innovations in multi disciplines. Also, they contribute in enhancing the quality of teaching in higher education.

Unlike the commercial networks, the academic networks provide researchers with unlimited, dedicated bandwidth that would enable them to run specific applications. In fact, RENs extend their benefits to offer researches with the tesbed to pilot different strategic technologies, as well as facilitate the international interconnection of the researches with their peers.

In this paper, we present the main concept of RENs and drivers of creation an academic network. Also, the functional and economical benefits of RENs will be covered. Different model of funding and ownership are discussed in some case studies. Last, I will shed the light of the progress of Saudi Arabian REN showing its importance to the country and will cover the main components of the project, namely, the current state assessment and application, prospective members, technical architecture. The presentation concludes with the challenges and success factors.



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Biography

Dr. Hesham Bin-Abbas is an assistant research professor at King Abdulaziz City for science and technology (KACST) and also he has been the director of internet services unit since ٢٠٠٦. Dr. Bin-Abbas graduated from the department of electrical engineering of King Saud University with first class honor, and received his Master's and Ph.D. from the department of Electrical and Computer Engineering from University of Washington, Seattle, and University of Pittsburgh in ١٩٩٦ and ٢٠٠٤ respectively. He has been a research faculty member at KACST where he participated in many scientific and applied researches in the areas of digital communications, network security, steganography, and Internet content filtration. Recently, Dr. Bin-Abbas has been appointed to lead two national projects that belong to the national plan for Science and Technology, and they are the development of NREN and constructing a consortium for electronic resources access and group subscription. Dr. Bin-Abbas is a PRINCE٣ and ITIL v٣ certified.