

# SECURITY IN THE WCDMA SYSTEM

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## **Abstract:**

With capability of transmitting data in high speed, the third generation (3G) of the mobile phone has revolutionized the way people use the phone. It enables people to use amazing services which need a broadband transmission line, namely Video Call, Mobile TV and especially Mobile Internet. With the appearance of Mobile Internet, subscribers are capable of accessing Internet for bank exchange, on-line shopping, stock market, weather forecast, etc anywhere they want. This has influenced strongly the world economy and people's lives. However, along with benefits of mobile systems, people also have to cope with many problems. One of the outstanding issues is information security. Hence, the important thing which needs to be dealt with is how to secure information to receive the desired data. Arising from this problem, this thesis will study a methodology of securing data in WCDMA system. The thesis comprises of three parts organized as followings. The first part presents general knowledge about WCDMA system. In this part, the details of diagrams and characteristics of WCDMA system will be inspected. The network security is shown in the second section which points out causes of the security problem and then provides solutions to secure information by encoding algorithms. In the final part, AKA authentication and security in WCDMA system is revealed.

**Keywords:** AKA, Authentication, Security.