西北工业大学本科毕业设计开题报告

专业：Information Security   **班级：09040901**

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报 告 题 目		基于仿射投影算法的信道评估技术研究				
题目来源（划√）		科研□	生产□	实验室□		其 他□
论文类型（划√）		工程设计类□	实验研究类□	软件开发类		其 他 □
报 告 日 期		年　月　日		报告地点		

本科生开题报告（不少于 1000 字）

<u>Background</u>: Digital communications and computers are having a tremendous impact on the world today. Over the past decades, a large body of computer-aided engineering techniques has been developed to facilitate the **design process of complex technological systems**. These techniques rely on models of devices and systems, both **analytic and simulation**, to guide the analysis and design throughout the life cycle of a system.

<u>Content</u>:

Chapter 1 would give a brief introduction to the history of simulation-based analysis and design, as well as an overview of the thesis.

Chapter 2 is about the mathematical representation of signals in simulation. It mainly talks about discrete-time signal, though some part of the continuous signal is mentioned. In particular, the math representation of **M-ary Phase-Shift Keying, Frequency-Shift Keying signals** would be discussed into detail with their MATLAB implementation discussed in later chapter.

Chapter 3 is the kernel of the thesis, where several simulation techniques are compared. Namely several popular **methods of Bit Error Rate (BER) measurement**. We compare the ideal Monte Carol method with Quasianalytical Estimation, and the Affine Projection Algorithm (some other algorithms may be added later). With each method, a **Binary Phase-Shift Keying (BPSK) system simulation** (the input would be a unit impulse function, and some other functions would be considered) is carried out.

Chapter 4 is the case study. It employs several (exact number to be determined) signals, one of them is M-ary Phase-Shift Keying Signal. The objective of case study is to study and evaluate the error probability performance (in different BERs) of the system in an **Additive White Gaussian Noise (AWGN)** environment, taking into account the **Inter-Symbol Interference (ISI)** effect at the transmitter.

<u>Expectancy</u>: Chapter 5 does the conclusion job; the exact outcome remains to be seen. The last chapter also talks about some future job that could have been carried out, be there more time.

<u>Reference</u>: See the appendix.

指导教师意见：

                                     签名：

                                     年　月　日

开题评议小组成员：	
开题评议小组意见：（包括对论文的选题、难度、进度、工作量、论文形式意见）： 1. 论文选题: □ 有理论意义；□ 有实用价值；□ 有理论意义与实用价值； 　　　　　□ 意义不大。 2. 论 文 的难度: □ 偏高；□ 适当；□ 偏低。 3. 论文的工作量: □ 偏大；□ 适当；□ 偏小。 4. 进度: □ 可行；□ 不可行； 5. 学生开题报告中反映出的综合能力和表达能力: 　　　　　□ 好；　□ 较好；一般；□ 较差。 6. 论文形式意见: □ 可行；□ 不可行； 7. 对论文选题报告的总体评价: □ 好；□ 较好；□ 一般；□ 较差。 （在相应的方块内作记号"√"） 　　　　　　　　　　　　　　　　　　　　组长签名：	
评议结论	是否同意论文选题报告：□ 同意；□ 需重作 （在相应的方块内作记号"√"） 　　评议小组组长签名：　　　　　　　　　年　　月　　日
学院意见	年　　月　　日

备注：本科生毕业设计论文开题报告要求

1. 本科生选题报告内容应包括：选题目的与背景、主要研究内容和方案、预期达到的目标。

2. 本科开题报告由各专业负责安排，公开进行；开题小组人员 3 人以上。

3. 学生在规定的时间内，写出选题报告初稿，经指导教师审阅同意后，由各专业安排开题报告时间；

开题学生自述 5 分钟，提问 5-10 分钟。开题报告未通过者，需重新开题。

4. 开题报告必须按期完成；如有问题应及时向所在专业或导师提出。

5. 开题报告统一用 A4 纸、正反两面打印。