

DIRECTORY PUBLISHING SOFTWARE (NXAPEX)

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BORANG PENGESAHAN STATUS TESISJUDUL: DIRECTORY PUBLISHING SOFTWARE (NXAPEX)

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DIRECTORY PUBLISHING SOFTWARE (NXAPEX)

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This technical report submitted in partial fulfillment
of the requirements for the award of the degree of
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NOVEMBER, 2005

I declare that this thesis entitled “*DIRECTORY PUBLISHING SOFTWARE NXAPEX*” is the result of my own research except as cited in references. The thesis has not been accepted for any master and is not concurrently submitted in candidate of any other master.

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*To Universiti Teknologi Malaysia
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ABSTRACT

The major sources of revenue for any telephone company (eg. Telekom Malaysia) is the selling of ads in their directories (ie. Yellow and White Pages). At first glance, this may seem like a simple process - go to a company, ask them if they would like to purchase an ad in the Yellow Pages, and if so design an appropriate ad and place it in the proper section. In reality, however, this process can be enormously complex, with various factors needing to be taken into account. They include the size of the ad, the number of colors it has, its position on the page, the size of the text, the number of lines that the buyer can specify text for, and number of different fonts it contains. When I joined net-linx and involved in nxApex project I was introduced to new methods in software development. The nxApex project team worked in an Extreme Programming (XP) environment one of agile methodology. So in this technical report I will discuss a little bit on XP practice and the different between this still evolving methodology and traditional methodology. Here I found that this XP methodology is a discipline of software development based on values of simplicity, communication, feedback, and courage. The different between traditional methodologies and agile methodologies is similar to the different between the situation when you are traveling by plane and traveling by your own car. In this writing I also talk about the project that I am involved with – nxApex. Here I will focus for the user story that been assigned to me, the System Administration. As conclusion, I found that using agile methodology is more reliable to this kind of project where involvement of customer in all phases is essential.

ABSTRAK

Salah satu sumber pandangan sesebuah syarikat telefon contohnya Telekom Malaysia ialah penjualan direktori telefon (*white pages/ yellow pages*). Proses ini nampak mudah, tetapi secara realiti proses adalah sesuatu yang rumit, dimana banyak faktor yang perlu diambil kira. Ini termasuklah saiz iklan, bilangan warna yang perlu, kedudukan iklan di halaman, saiz teks, bilangan baris dan bilangan font yang perlu digunakan. nxApex dibangunkan adalah untuk memudahkan proses ini. nxApex bukan sahaja digunakan untuk proses pengalaman ini tetapi juga meliputi proses jualan, kempen, penyenaian dan lain-lain. Proses pembangunan nxApex ini menggunakan satu metodologi baru iaitu *Extreme Programming* (XP). XP merupakan salah satu jenis metodologi berasaskan metodologi *Agile*. Laporan teknikal ini akan membincangkan secara informatif kaedah XP dan perbandingan antara kaedah ini dan metodologi tradisional. Didapati bahawa metodologi XP ialah satu disiplin pembangunan perisian yang mementingkan, permudahan, komunikasi, maklum balas dan ketahanan. Perbezaan diantara metodologi tradisional dan metodologi *Agile* adalah bersamaan dengan situasi di mana anda membuat perjalanan merentasi negara menggunakan kapal terbang dan kereta anda sendiri. Fokus penulisan ini adalah lebih kepada projek yang saya libati iaitu nxApex. Juga dibincangkan secara lanjut ialah modul yang diberikan kepada saya iaitu modul *System Administration*. Secara kesimpulannya, setelah selesai menjalani latihan, didapati penggunaan metodologi *Agile* adalah lebih sesuai untuk situasi projek ini dimana pelibatan pengguna ada maksimum.

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LIST OF ABBREVIATIONS

XP	Extreme Programming
Apex	nxApex
RnD	Research and Development

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CHAPTER 1

INTRODUCTION

1.1 Introduction

During my five-month internship, I was placed as a Java developer in the Research and Development (Rnd) department of the Net-linx Asia Pacific Sdn. Bhd. This was a very exciting department in which to work, as the main goal was to develop new products through the exploration and use of the newest technologies. The department contained some of the most highly skilled people in the industry, and by working alongside them I was able to constantly learn new things. Here I was assign to a project named nxApex.

1.2 Company Background

Net-Linx is a company that has more than 31 years experience in publishing solutions. There are more than 280 employees working for Net-Linx now and over 200 customers worldwide. Net-Linx have eight offices around the globe that are in two offices in Germany, two in United States, and one office in Canada, Malaysia, Brazil, Australia.

Net-Linx offers software designed to foster growth, while solving the publishing challenges of today, reducing Total Cost of Ownership. Net-Linx solutions are intended to reduce the complexity of the publishing process. Here solutions create immediate business value for media publishers by streamlining their production processes, whether it is ad sales, ad production or the creation and publishing of editorial content.

Net-Linx provides the solution for Yellow Pages directories and for the Newspaper and Magazine industry. The current products are as below:

- i. **nxDSMP** : End-to-end advertising sales and production solution for medium and large Telephone Company Publishers.
- ii. **nxStar** : Complete, integrated, directory publishing solution for Independents and for smaller Telephone Company Publishers.
- iii. **nxPageSmart** : Award-winning pagination system for yellow pages and directories.
- iv. **nxAdSmart** : Display-Ad management solution
- v. **nxAdvertising** : Integrated advertising management system for small, medium and large newspapers.
- vi. **nxEditorial** : Multi-Media editorial content management solution with workflow engine and digital production management.

1.3 Project Background

Apex is a series of components, both in-house and 3rd party, that make up an end-to-end Content and Advertising management application to support print directory and web directory publishers.

The product is being developed from the start as a fully internationalized product with multi-language and multi-currency support, configurable address structures and components, and recognition of certain regional issues that should be configurable from country to country, or even state to state. Known requirements are polled from the Americas, Europe and Asia-Pacific regions to ensure as broad a product as possible.

Apex seamlessly integrates Directory Print and Internet publishing needs. This product integration, combined with the intuitive GUI and workflow, would give net-linx a competitive product for the marketplace and meets directory and internet publisher's requirements.

1.4 Project Overview

Apex will provide a full-function, leading edge solution for the directory publishing industry for both print and web media. It is being built to be an extensible product that is easy to upgrade and to customize.

The modular structure will allow Apex modules to be sold to clients that require one or two functions (modules). Such a sale can frequently expand into further sales and often end in a full system sale.

The Apex target market is primarily the mid-tier Telco directory publisher. There are additionally markets that Apex may penetrate, for example, the top-tier Telco directory publishers and the top-tier Independent directory publisher markets.

1.5 Project Objective

The ultimate objective of the project was to produce a full function application capable of end-to-end directory publishing processing (service order "new in" through production and claims). Ideally, the application would consist of a number of well-defined, discrete, large-grained components. These software components would be usable independently or as part of a component package. Several components might even be combined to produce a full application.

The application was built by extending the corporation's existing Java system architecture and offered a 3-tier technical platform; in other words, the presentation layer, business logic, and persistence were all separated. The product was to be internationalized within the restrictions of native Java capabilities, including the internationalization of screen literals, messages, date/currency formats, etc. The product would also be customizable and modular, major subsystems would be isolated via well-defined interfaces (API's or file-based), business rules could be

easily substituted at compile-time, and the product would retain its reference-table-driven nature.

1.6 Project Scope

For this project, I will concentrate on implementation of Apex security component. The objective of the security component:

- Designated administrators can assign, create and maintain user IDs, and can define access profiles and global usage profiles for system users.
- Access controls within the system guarantee that only authorized user can access certain fields/data/screen/functions.

Apex's security component should be able to provide system security at the following levels:

- Screen/functional area level
- user level
- field level
- data level

In addition APEX should provide:

- logon security
- menus, tool bar, screen and field permission based on a user's access profile or privileges
- User activity tracking
- System log file and error handling

1.7 Planning

The project starts from 16th August 2004 and end on 15th January 2005. All the progress of the project is check into primavera – a software for progress report.

Below are the writer involvements in this project

- i. 16th August 2004 to 10th September 2004 – Training on Apex Development
- ii. 16th September 2004 to 21 November 2004 – Release 0.6, Iteration 4. Implement security stories. Refer appendix A.
- iii. 6th December 2004 to 14 January 2005 – release 0.7, Iteration 2. Enhancement on Security stories. Refer appendix A.

1.8 Development Team Structure

First figure show APEX Product and BETA Client Project Structure. Primarily the team prepare BETA client to receive deliveries and assist in delivery implementation

Figure 2 show the how nxApex are being developed. The team that based in Malaysia are consist of product owner, project development manager, two business analyst, project coordinator, and seven java developer.

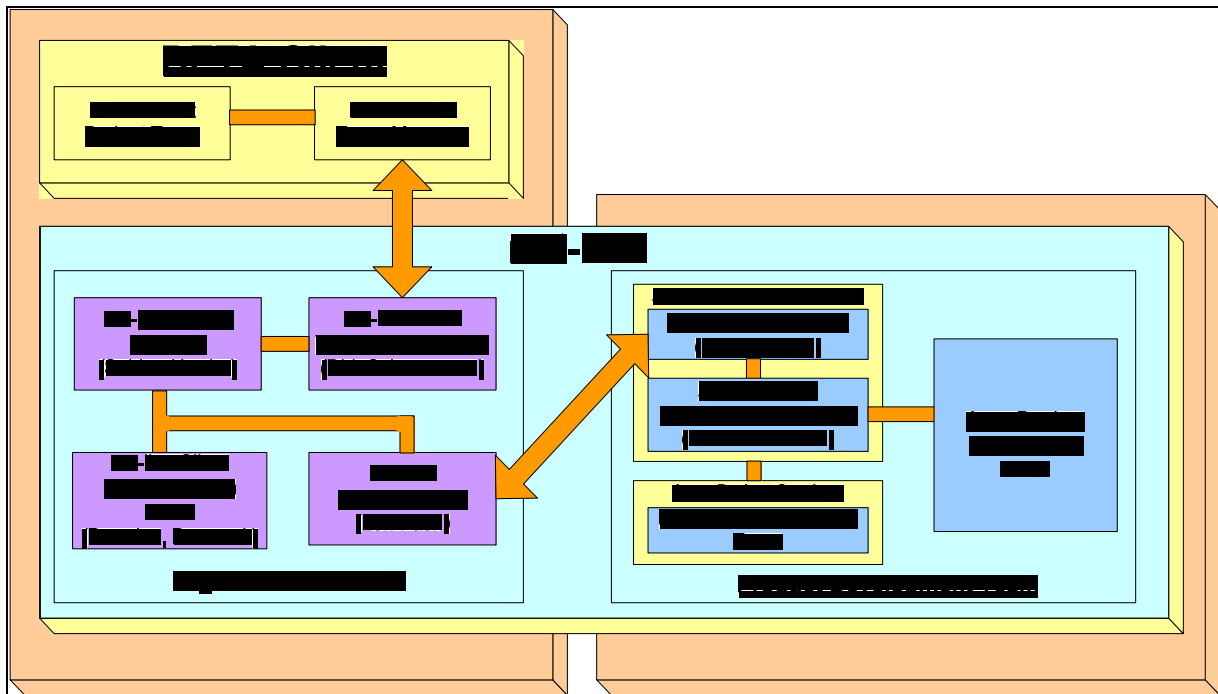


Figure 1.1: Apex Structure

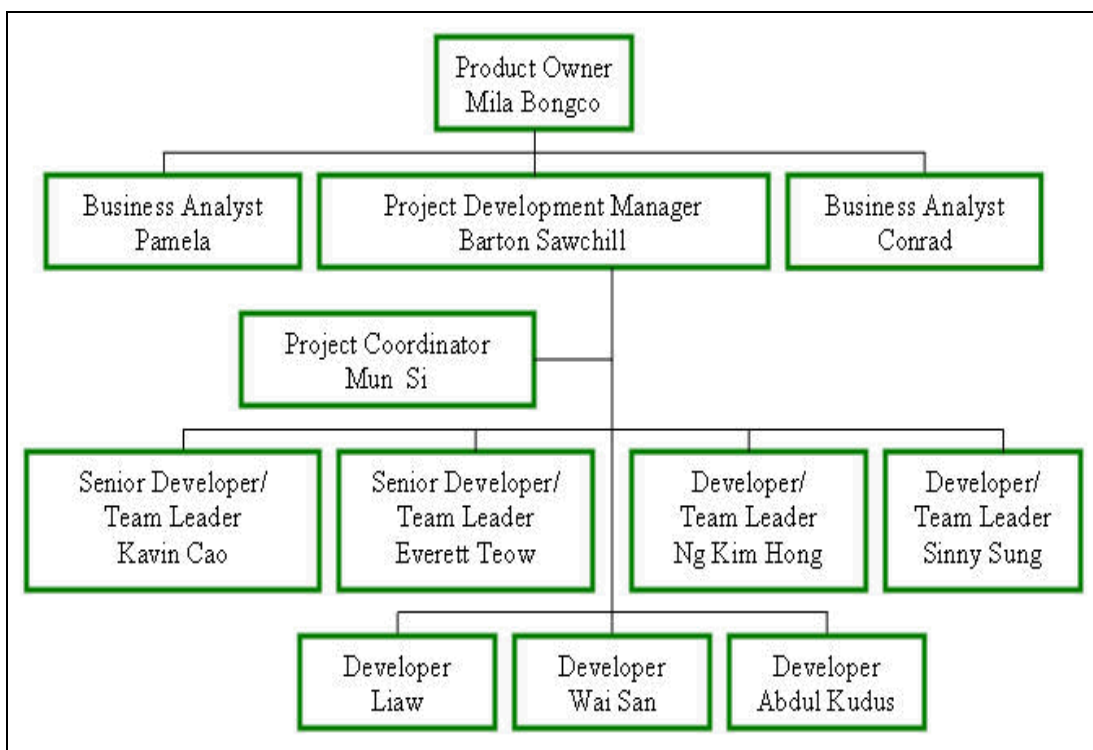


Figure 1.2: Kuala Lumpur Development Team

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