

A faint, light blue world map is centered in the background of the slide, showing the continents of North America, South America, Europe, Africa, and Australia. The map is semi-transparent and serves as a backdrop for the text.

Dynamic Network Device Mapping System (DNDMS)

Preliminary Design
By
SKYNET Software

Welcome

Mr. Ken Swarner
Senior Systems Administrator
School of Science
Siena College
&
Mr. Eric Crossman
Assistant Systems Administrator
School of Science
Siena College

Agenda

- Introductions
- Data Flow and Structure Diagrams
- Logical Data Stores
- Test Plan
- Prototypes
- Timeline

Team SKYNET

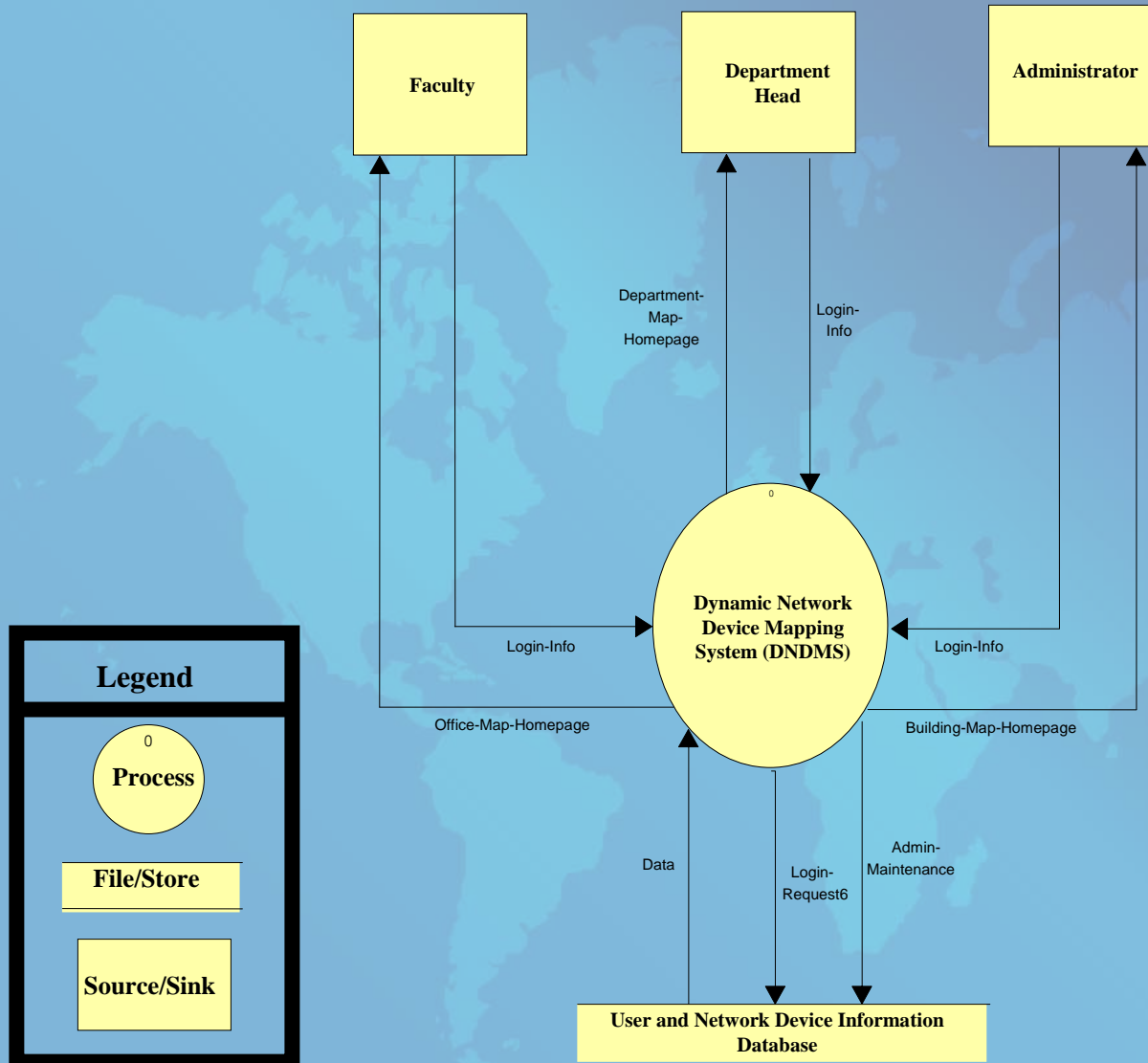
- Kevin Fealey Project Champion
- Heimdall Imbert Systems Administrator
- Stephanie Maloney Documentarian
- Trevor March Webmaster
- Andrew Warner Systems Analyst

Problem Definition

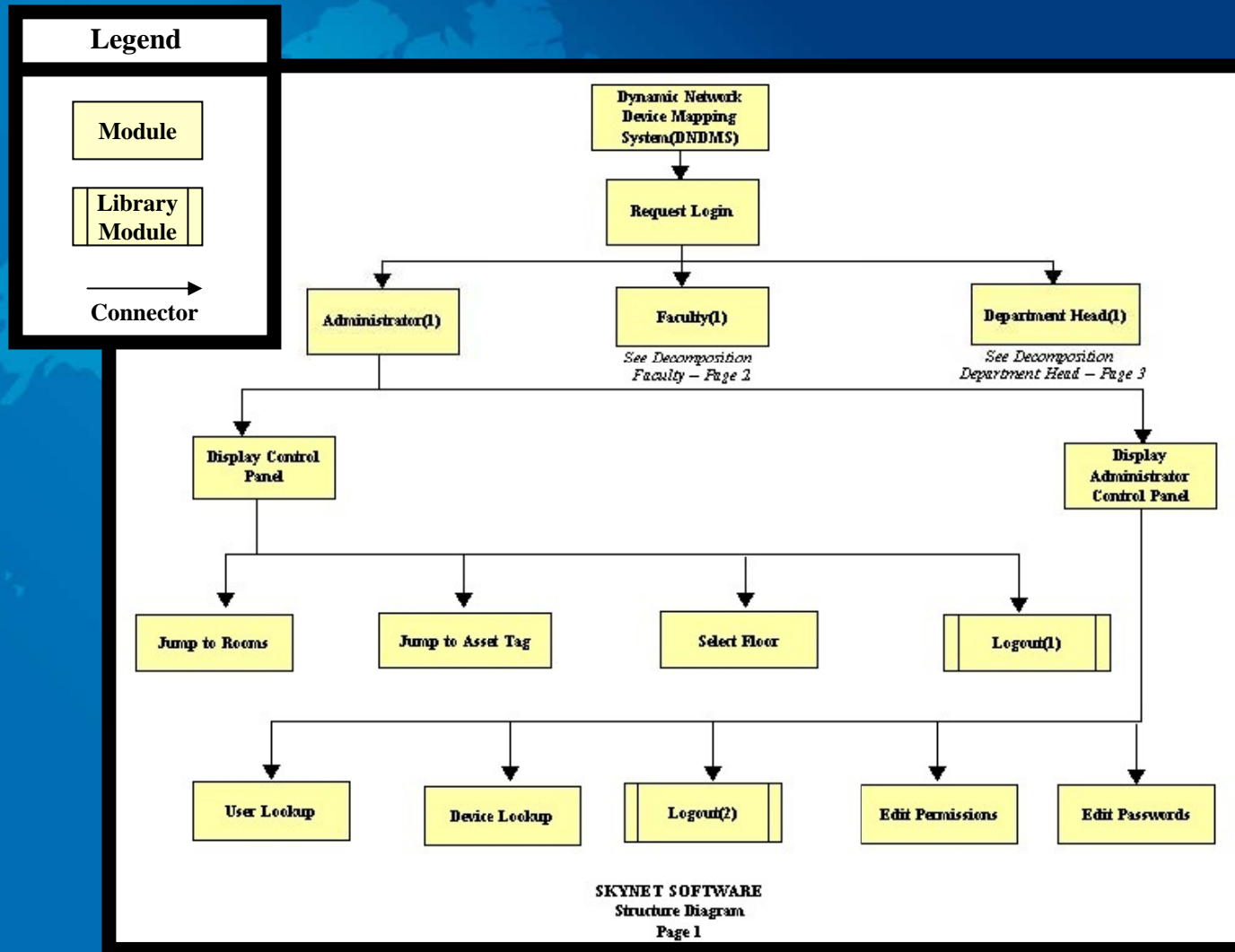


- Current methods are inefficient
- Data is only accessible locally
- Device information is scattered
- Current digital maps: not easily updated

Context Diagram



Structure Diagram



Logical Data Stores (User Table)

Table: User

Lname: CHAR(12)

-User's last name

Fname: CHAR(12)

-User's first name

UserGroup: VARCHAR(15)

- Describes user's permission group

Logical Data Stores (Room Table)

Table: Room

Num: VARCHAR(5)

- Room number

Building: CHAR(3)

- Building the room is found in

Logical Data Stores (Room Table cont.)

Department: CHAR(15)

- Department the room is used by

Type: CHAR(10)

- Type of room (ex. lecture, lab)

EEC: CHAR(1)

- Electronically Enhanced Classroom - Y/N

Test Catalog

Test Result	Test Number	Unit Test Name
P F	1	Login Page
P F	2	Floor Plan Page (Administrator)
P F	3	Room Plan Page (Administrator)
P F	4	Main Menu Page (Administrator)
P F	5	Administrator Control Panel Page
P F	6	Search Page (Administrator)
P F	7	Floor Plan Page (Department Head)
P F	8	Room Plan Page (Department Head)
P F	9	Floor Plan Page (Faculty)
P F	10	Room Plan Page (Faculty)
Pass/Fail:		
P = Pass		
F = Fail		

Unit Test Example - Admin Control Panel

Number	Test Case Name	Description	Input	Expected Result	Actual Results/Comments	Test Result (Pass/Fail)
5.01	Change User type to Administrator	Change User type to Administrator	Left-click radio button marked Administrator. Left-click Submit button.	Page generated informing the user of the user permission change.		
5.02	Change User type to Department Head	Change User type to Department Head	Left-click radio button marked Department Head. Left-click Submit button.	Page generated informing the user of the user permission change.		
5.03	Change User type to Faculty	Change User type to Faculty	Left-click radio button marked Faculty. Left-click Submit button.	Page generated informing the user of the user permission change.		
5.04	Assign Device to user	Assign Device to user (Valid Information)	Known asset tag into Asset Tag text box. Left-click Submit button.	Page generated informing the user of addition of device to user's permissions.		
5.05	Assign Device to user (Invalid information)	Assign Device to user (Invalid Information)	Unknown asset tag (ex. 1) into Asset Tag text box. Left-click Submit button.	Page generated informing the user that inputted asset tag was not found in the database.		
5.06	Assign multiple devices to user	Assign Devices to user (Valid Information)	Known asset tags (separated by comas) into Asset Tag text box. Left-click Submit button.	Page generated informing the user of addition of devices to user's permissions.		
5.07	Assign multiple devices to user (Invalid information)	Assign Devices to user (Invalid Information)	Unknown asset tags (separated by comas) into Asset Tag text box. Left-click Submit button.	Page generated informing the user that inputted asset tag was not found in the database.		
5.08	Assign multiple devices to user (Invalid delimitator)	Assign Devices to user (Invalid delimitator)	Known asset tags (separated by semi-colon) into Asset Tag text box. Left-click Submit button.	Page generated informing the user that inputted asset tag was not found in the database.		
5.09	Search for asset tag by IP Address (valid IP)	Search for asset tag by IP Address (valid IP)	Known IP address into IP Address text box. Left-click Submit button.	Page generated displaying matching inputted IP address with options to select each device		
5.1	Search for asset tag by IP Address (unknown IP)	Search for asset tag by IP Address (unknown IP)	Unknown IP address into IP Address text box. Left-click Submit button.	Page generated displaying no matches for IP address		
5.11	Search for asset tag by MAC Address (valid IP)	Search for asset tag by MAC Address (valid IP)	Known MAC Address into MAC Address text box. Left-click Submit button.	Page generated displaying matching inputted MAC Address with options to select each device		
5.12	Search for asset tag by MAC Address (unknown IP)	Search for asset tag by MAC Address (unknown IP)	Unknown MAC Address into MAC Address text box. Left-click Submit button.	Page generated displaying no matches for MAC Address		
5.13	Select Administrator Control Panel	User clicks the link for the Administrator Control Panel	Left-click the link for the Administrator Control Panel	Administrator Control Panel web page loads.		
5.14	Select logout	User clicks the link to logout	Left-click the link to logout	Logout confirmation message is displayed.		
5.15	Select Siena College	User clicks the link for Siena College web site	Left-click the link for Siena College web site	Siena College web page loads.		
5.16	Select Siena College Computer Science	User clicks the link for the Siena College Computer Science Department	Left-click the link for the Siena College Computer Science Department	Siena College Computer Science Department web page loads.		
5.17	Select Siena College Software Engineering	User clicks the link for Siena College Software Engineering	Left-click the link for Siena College Software Engineering	Siena College Software Engineering web page loads.		
5.18	Select SKYNET Software	User clicks the link for SKYNET Software	Left-click the link for SKYNET Software	SKYNET Software's web page loads.		
5.19	Select Control Panel	User clicks the link for the Control Panel	Left-click the link for Control Panel	Control Panel page loads.		

Pass/Fail

DNDMS: Login Screen (all users)



SKYNET SOFTWARE

Dynamic Network Device Mapping System

Welcome to SKYNET Software's Dynamic Network Device Mapping System!

Please log in to gain access to the Siena College School of Science network device information.

Username:

Password:

[Siena College](#) | [Computer Science Department](#) | [Siena Software Engineering](#) | [SKYNET Software](#)
[\[Project Home\]](#)

DNDMS: View Users



SKYNET SOFTWARE

Dynamic Network Device Mapping System

View Users

Welcome, ADMIN

[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)

Username	User Type	Permissions	
ADMIN	Administrator	ALL	<input type="checkbox"/>
AWARNER	Faculty	View Room, View Room	<input type="checkbox"/>
DHEAD	Department Head	View Dept, View Room	<input type="checkbox"/>
F_MEM	Faculty	View Room	<input type="checkbox"/>
HIMBERT	Administrator	ALL	<input type="checkbox"/>
KFEALEY	Department Head	View Dept, View Room	<input type="checkbox"/>
SMALONEY	Department Head	View Room	<input type="checkbox"/>
TMARCH	Faculty	View Room	<input type="checkbox"/>

[Add](#) [Remove](#)

[Siena College](#) | [Computer Science Department](#) | [Siena Software Engineering](#) | [SKYNET Software](#)
[Project Home]

DNDMS: Admin Main Menu



SKYNET SOFTWARE

Dynamic Network Device Mapping System

Main Menu

Welcome, ADMIN

[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)

Roger Bacon:

[RB 1st Floor](#)

[RB 2nd Floor](#)

[RB 3rd Floor](#)

[RB 4th Floor](#)

Morell Science Center:

[MSC 1st Floor](#)

[MSC 2nd Floor](#)

[MSC 3rd Floor](#)

Enter a room to jump to:

Select an asset tag to jump to:

[\[NetRegistration\]](#) | [Reset user password](#)

Siena College | Computer Science Department | Siena Software Engineering | SKYNET Software

DNDMS: Admin Control Panel



SKYNET SOFTWARE

Dynamic Network Device Mapping System

Administrator Control Panel

Welcome, ADMIN

[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)

[View User List](#)

Please set permissions for Faculty [USER](#)

User type:

Administrator:

Department Head:

Faculty:

Insert asset tag to assign to [USER](#):
Seperate multiple asset tags with commas.

21095

Search for device asset tag by:
(result will be auto-inserted in the field above)

192.168.0.99

IP Address
 MAC Address

[Siena College](#) | [Computer Science Department](#) | [Siena Software Engineering](#) | [SKYNET Software](#)
[\[Project Home\]](#)

DNDMS: Administrator Search



SKYNET SOFTWARE

Dynamic Network Device Mapping System

Search

Welcome, ADMIN

[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)

Select a floor:

Enter search criteria

Enter item: Search

- Asset Tag Number
- IP Address
- MAC Address
- Serial Number

Find rooms that contain at least one

- PC
- Mac

Search

Advanced Search Options:

Building:

- Roger Bacon Hall
- Morell Science Center

Floor

- 1
- 2
- 3
- 4

Room: ###

Network Device Type

- Desktop
- Laptop
- Printer
- Misc

Adv Search

[Siena College](#) | [Computer Science Department](#) | [Siena Software Engineering](#) | [SKYNET Software](#)
[\[Project Home\]](#)

DNDMS: Floor View



SKYNET SOFTWARE

Dynamic Network Device Mapping System

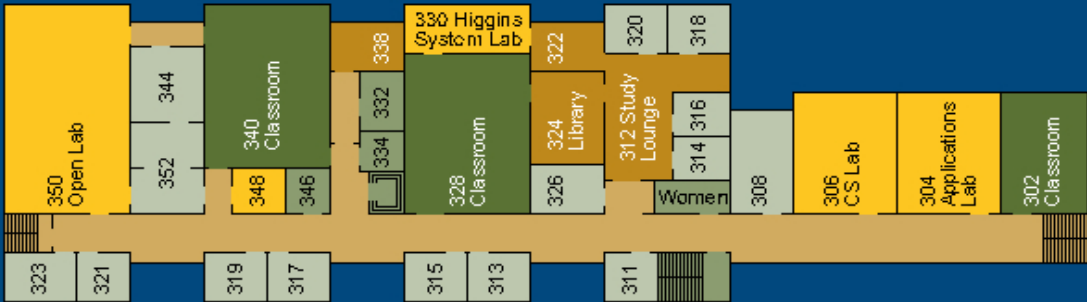
Floor Selection

Welcome, ADMIN

[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)

Current Floor: Roger Bacon, 3rd Floor

Please select a new floor:



DNDMS: Room View



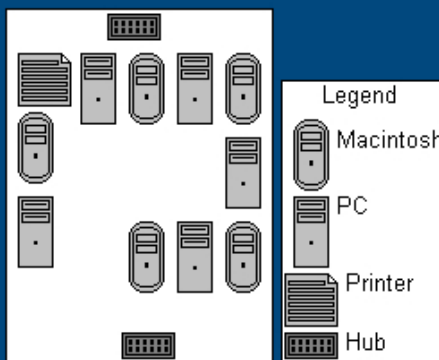
SKYNET SOFTWARE

Dynamic Network Device Mapping System

Room Selection

Welcome, ADMIN

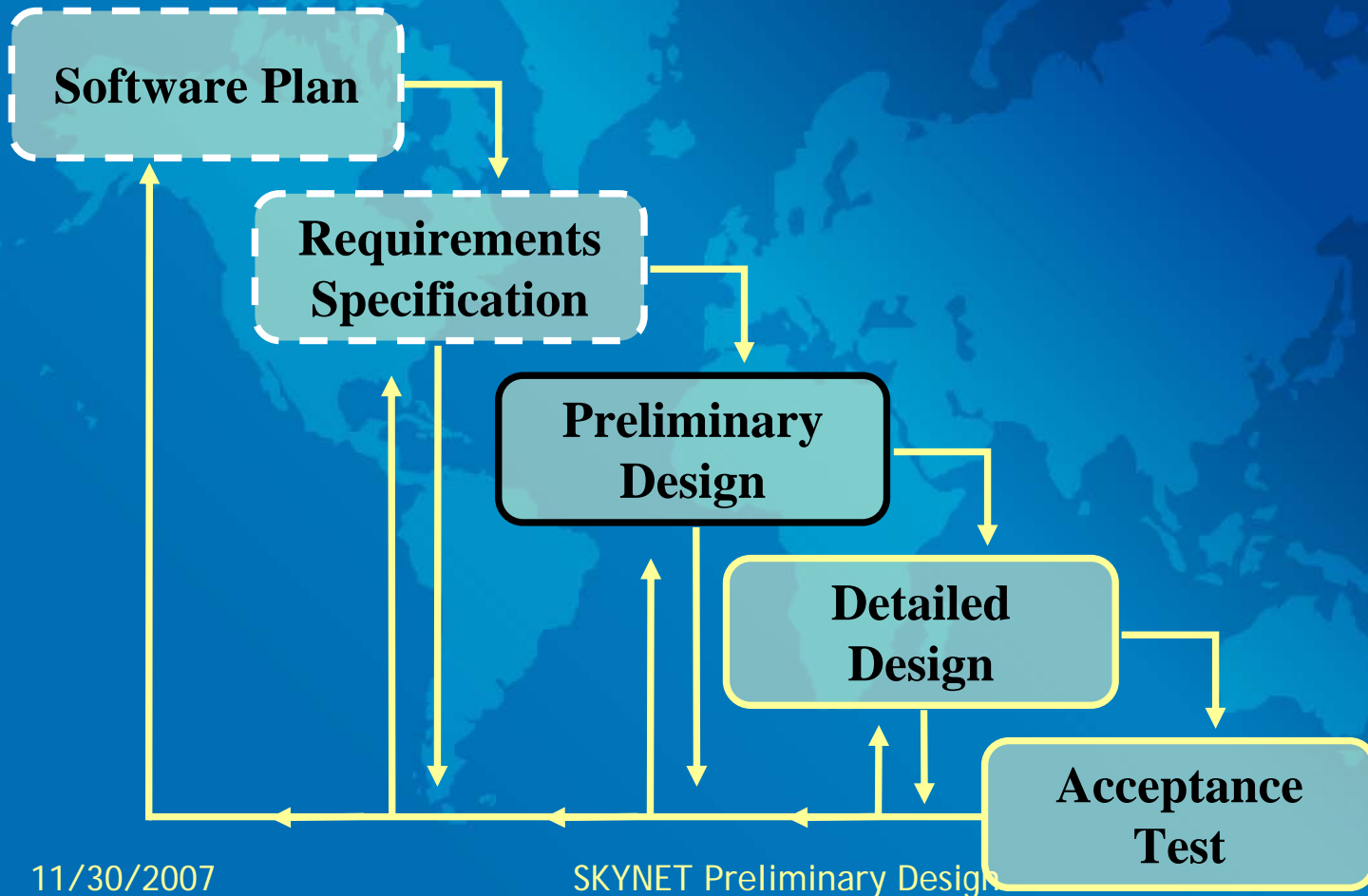
[Control Panel](#) | [Administrator Control Panel](#) | [Logout](#)



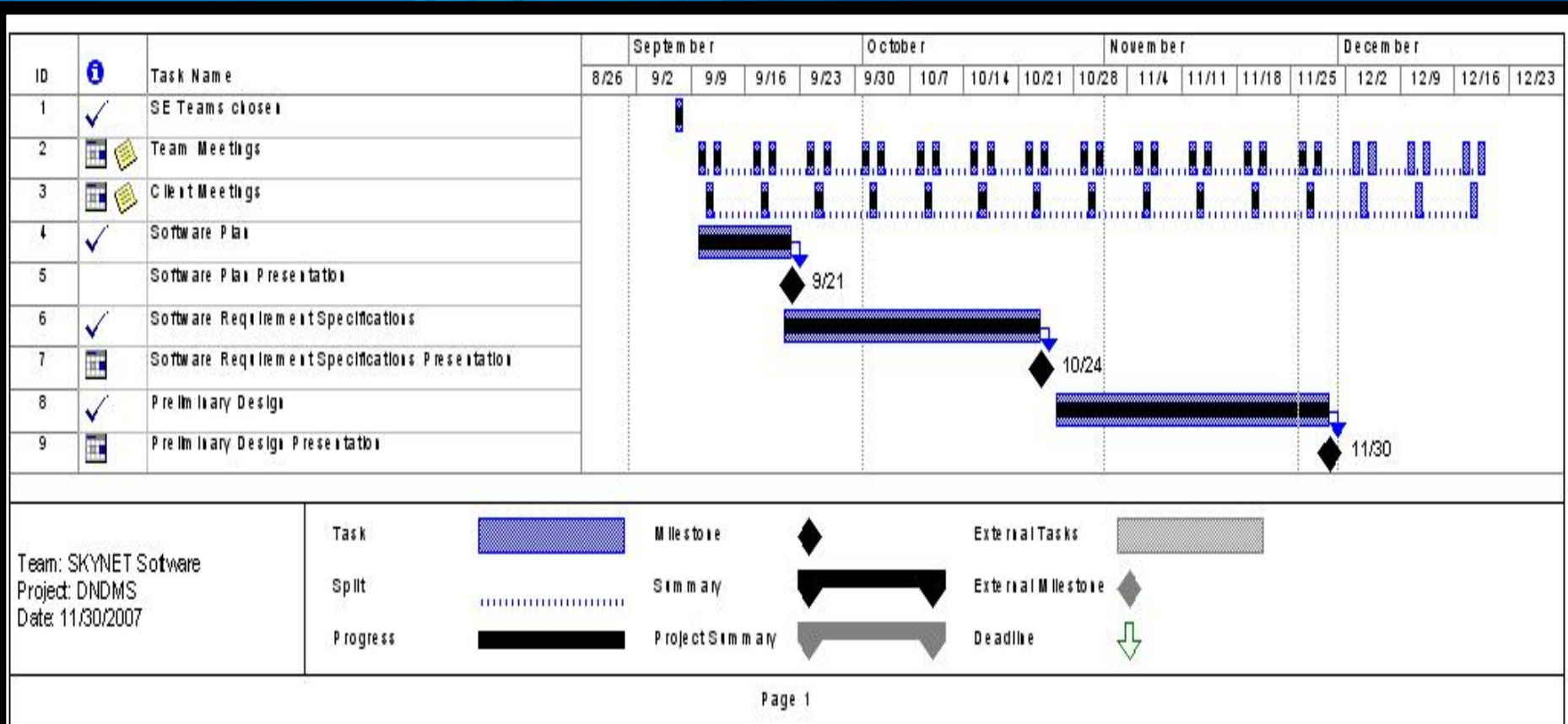
Roger Bacon Hall - 3rd Floor - Room 348

Waterfall Model

(Linear Sequential Model)



Timeline



Supporting Documentation

- Preliminary Design - Presentation: November 30, 2007
- Detailed Design - Spring 2008
- Acceptance Test - Spring 2008

Summary

Any Questions?