IPRO 347

Implementation of Data Management Software

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Summary

I Abstract

The IPRO 347 team was sponsored by Abrasive-Form, Inc. to create a paperless solution for file storing. Abrasive-Form, Inc. currently stores their job folders in filing cabinets. Documents are added to the job folder from various departments as the project circulates throughout the company. Once the project is completed, the job folder is filed into the company's archives.

To date, this has led to several problems for Abrasive-Form, Inc. As the company expands, they have to dedicate large portions of their offices to store old job folders. A lot of time is wasted as employees travel to and from storage to look up information from the old job folders. Furthermore, because there are several departments within the company that reference the job folders, they are often misplaced or lost. In addition, if there were a disaster, such as a fire, all the files would be permanently lost.

In response to these problems, the IPRO 347 team has worked with Abrasive-Form, Inc. to develop an electronic content management system. Last semester, the IPRO team consulted Abrasive-Form, Inc. to determine the best possible solution for their problem. After initial consultation the team divided into subgroups to investigate possible digital content management solutions based on Abrasive Form, Inc.'s needs and wants. Four possible programs were presented to the company and, ultimately, the program SharePoint was selected. SharePoint was chosen because its features met the most of Abrasive Form, Inc.'s requirements.

This semester's job will be to create a fully working version of SharePoint from last semester's prototype. In addition, this semester's IPRO will also be responsible for full implementation of this working version on Abrasive-Form, Inc.'s servers and the creation of an instructional program and guide for the employees of Abrasive-Form, Inc so that the company may begin its transition to a paperless database by the end of the year.

II Background

Abrasive Form is a contract-based manufacturer that specializes in precision grinding. They provide services for many metal industries, but focus primarily on the Gas Turbine and Aerospace Industries. Established in 1976, Abrasive-Form is a multimillion-dollar company with a modern 62,000 square foot plant in Bloomingdale Illinois, that houses 37 creep feed grinding machines.

As the unfinished products are received from the customer, Abrasive Form creates a “job number” and “job folder” for that batch of product. This number and folder collect all the relevant data regarding the processing done to that batch. Abrasive Form uses a program called “Vista” that generates a large part of the paperwork and tracks other activities throughout the completion of the project. A physical job file is created and collects all of the paper documents that are related to the processing of the job. Most of the documents contained in this folder can be summarized as: incoming receiving documents, contract review and PO documents, in process inspection documents, subcontracting documents, shipping documents, quality control certificates, job processing documents, and other miscellaneous documents. Each of these documents is generated during various processes along the path of receipt, processing, inspection, and shipping. Depending on the status of the job, i.e. open, pending, and closed, the job folder will be stored in one of many different areas. This can lead to the job folder being misplaced since there can be ambiguity about the status of the job.

There are various personnel that need access to the job files at assorted times for a range of reasons. These include Production, Quality Control, Sales, and Accounting. Access to these files may be required while the job is waiting to be processed, while it is in process, and several months after processing has been completed.

Abrasive Form has contracted the IPRO 347 to create a digital form of the job folder that can easily be accessible to all branches of the company remotely at their workstations. The folders should be searchable based on the job number, the customer name, and the part number, as well as a time range for its creation. The access will allow viewing rights, printing, and emailing, and at no time will the documents be removed or altered from the database. There will need to be a procedure to quickly destroy the paper

documents once they have been scanned into this system making the digital copy referenced by everyone.

This IPRO project has entered its second semester. The interviews conducted last semester along with the meetings with corporate management allowed a “needs and wants” list to be established which led to the successful creation of a prototype. The database management program chosen was Microsoft SharePoint because it meets all the sponsor’s requirements while minimizing cost. Since the company already has several servers running, the implementation should be relatively inexpensive. This is not the first time a company has moved towards digital data storage and local network sharing. There are many examples of companies that have chosen to use digital storage successful. It is the responsibility of the IPRO team to implement a working version of SharePoint on Abrasive-Form’s servers and find the best way to transition the company’s employees to this new paperless record system.

III Objectives

A Main Objectives

To fulfill the customer's requirements for an online storage system using Microsoft Sharepoint database software.

B Sub Objectives

- Meet with the customer and determine final system requirements to finish coding.

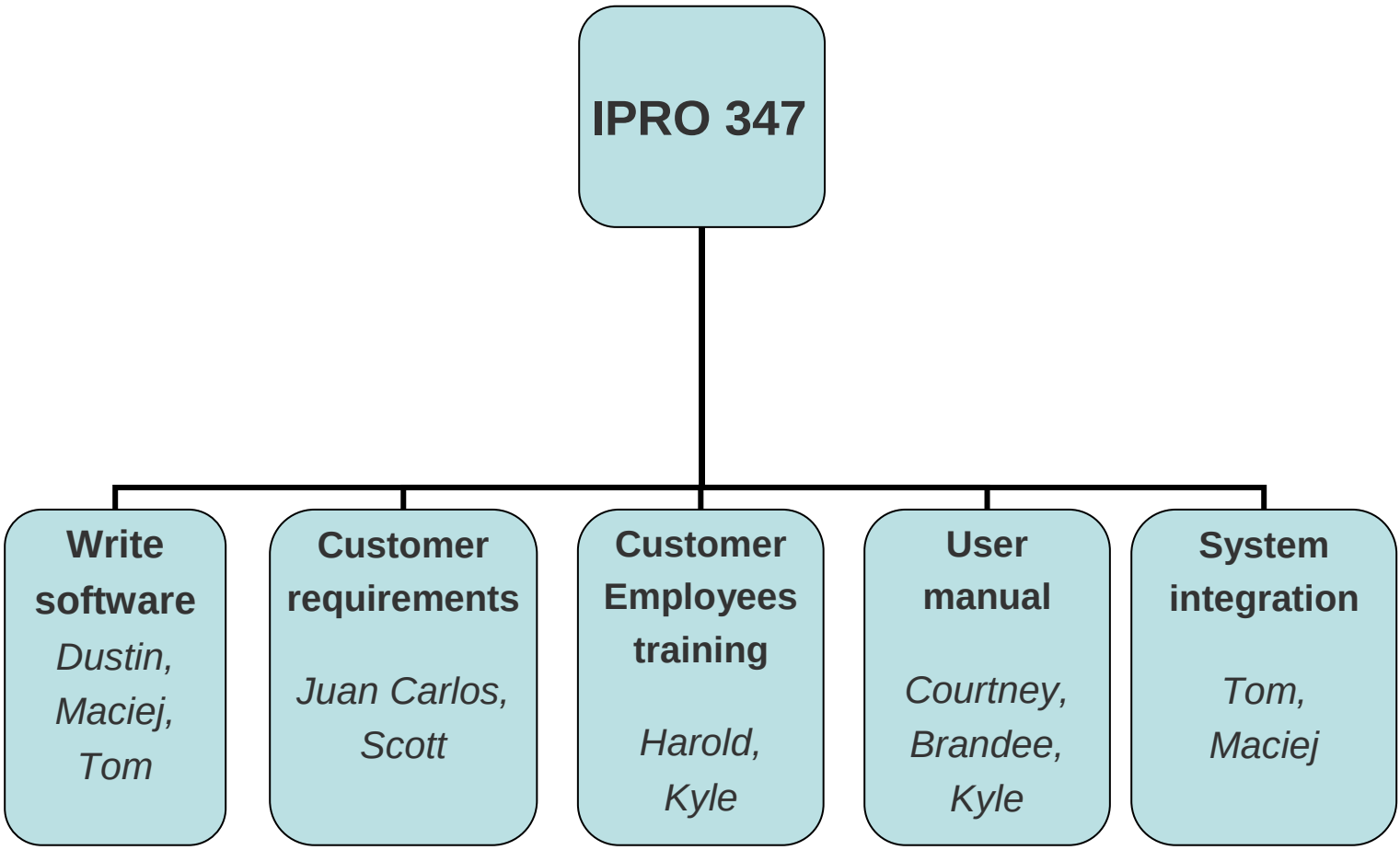
- Complete or re-write Sharepoint Database software to meet customer's specifications.

- Implement database system and train necessary peoples at client's workplace.

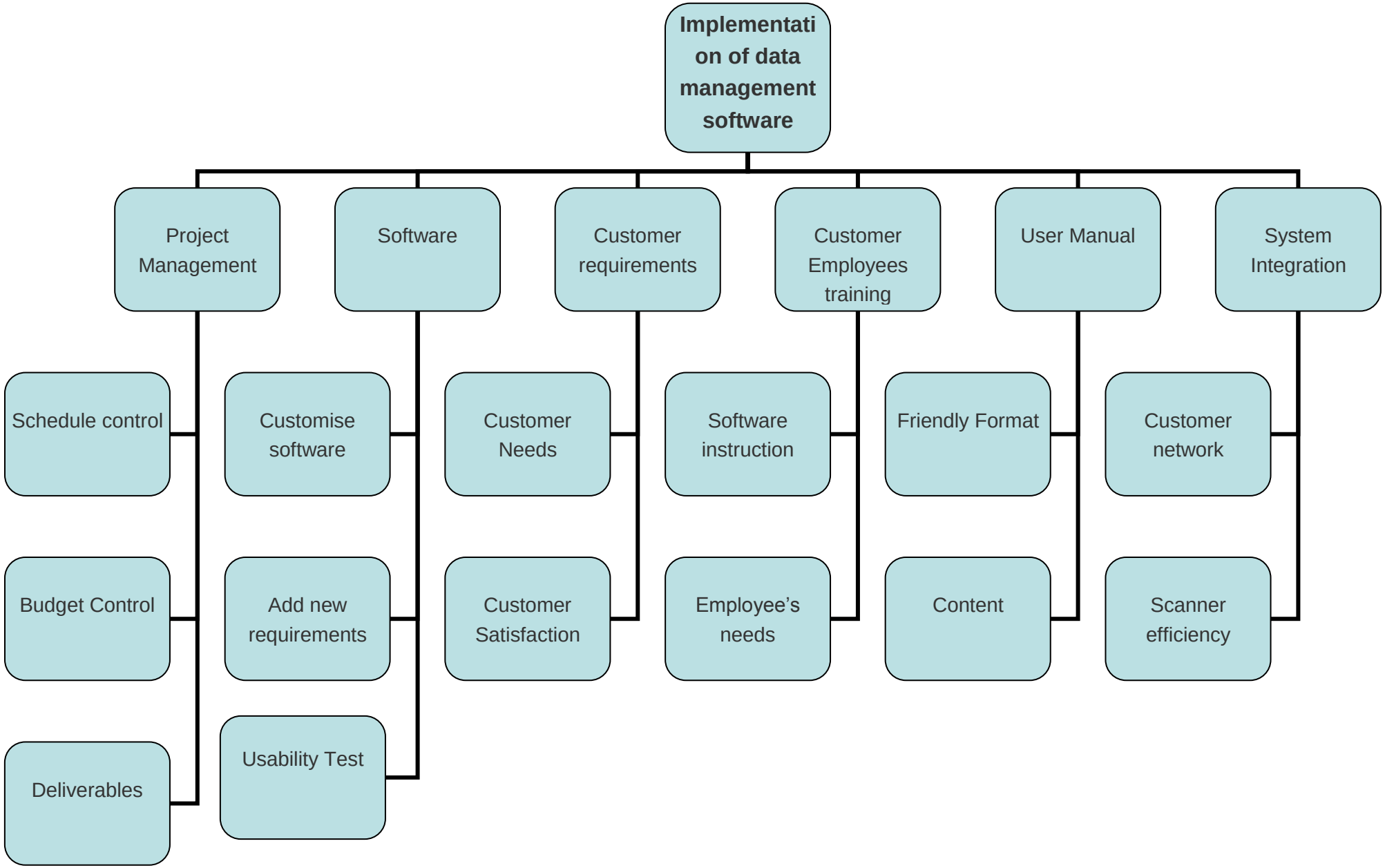
- Provide initial technical support and feedback after installation of system.

IV Methodology

A Organization Breakdown Structure (OBS)



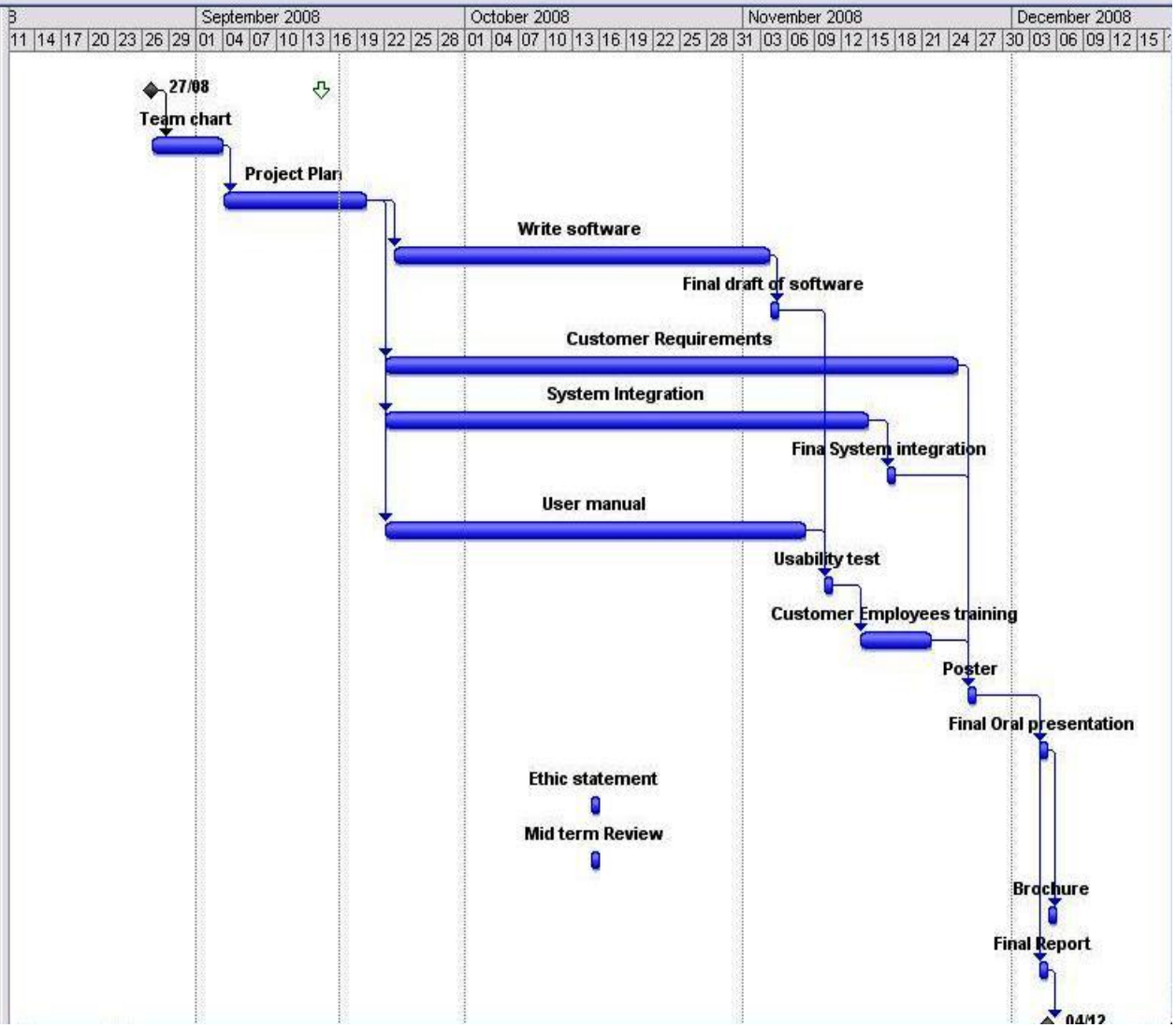
B Work Breakdown Structure (WBS)



C Gantt Chart

Project Plan

	Task Name	Duration	Start	Finish	Predec
2	IPRO Start	0 days	Wed 27/08/08	Wed 27/08/08	
3	Team chart	6 days	Wed 27/08/08	Wed 03/09/08	2
4	Project Plan	12 days	Thu 04/09/08	Fri 19/09/08	3
5	Write software	30 days	Tue 23/09/08	Mon 03/11/08	4
6	Final draft of software	1 day	Tue 04/11/08	Tue 04/11/08	5
7	Customer Requirements	46 days	Mon 22/09/08	Mon 24/11/08	4
8	System Integration	40 days	Mon 22/09/08	Fri 14/11/08	4
9	Fina System integration	1 day	Mon 17/11/08	Mon 17/11/08	8
10	User manual	35 days	Mon 22/09/08	Fri 07/11/08	4
11	Usability test	1 day	Mon 10/11/08	Mon 10/11/08	10;6
12	Customer Employees training	6 days	Fri 14/11/08	Fri 21/11/08	11
13	**Poster**	1 day	Wed 26/11/08	Wed 26/11/08	7;12;9
14	**Final Oral presentation**	1 day	Thu 04/12/08	Thu 04/12/08	13
15	**Ethic statement**	1 day	Wed 15/10/08	Wed 15/10/08	
16	**Mid term Review**	1 day	Wed 15/10/08	Wed 15/10/08	
17	**Brochure**	1 day	Fri 05/12/08	Fri 05/12/08	14
18	**Final Report**	1 day	Thu 04/12/08	Thu 04/12/08	13
19	End Of IPRO	0 days	Thu 04/12/08	Thu 04/12/08	18



V Budget

Data Hooligans Budget		
Expense Type	**Cost**	**Rationale**
Travel	$1 000	We will be taking many trips out to our client via train and/or car.
Consultant	$500	We will need to hire a consultant to help implement the database we have, and integrate the system at Abrasive Forms
Office Printing	$20	We will need to print user manuals for our client.
TOTAL	**$1 520**	

VI Team Structure and Assignments

A Team Structure

Skill Set List

Team Member	Major	Excelled Skills	Professional Experience and Academic Interest	Task In IPRO
Kyle	Internet Communications	Verbal / Visual Communication, Web Design, Gantt Charts	Internship as document management and comprehensive review with CCC department on Campus, interested in document management system and verbal communication.	User Manual + Customer employee training
Brandee	Mechanical Engineering	Visual design/communication, and written communication	Internships in construction company and Power Plant, experience working in cost department and drafting Interested in Engineering Graphics/ drafting and design.	User Manual
Courtney	Aerospace Engineering	Written Communication	No professional experience. Interested in rocketry and rocket design.	User Manual
Tom	Aerospace Engineering	SQL Experience	SQL database programming, BASIC stamp flight computer programming <Adler test sattelite>	Write software + System integration
Harry	Biomedical Engineering	Programming Experience, Written Communication, Web Design	Neural Engineering; Software Programming	Customer employee training
Dustin	Computer Science	Java Programming Experience, Researching over the Internet	No professional experience. Interested in designing software.	Write software
Maciej	Biomedical Engineering	Verbal / Visual Communication, programming experience, hardware design	Neural Engineering device construction and demonstration (2 years) Currently designing neural probe controllers.	Write software + System integration
JC	Industrial Technology and Management	Project Management skills, Ganntt charts, Organisation, work breakdown structures, and layouts. (Experience in industrial operations)	Project management in many associations, Internships in purchasing, Industrial quality and financial control	Customer requirements
Scott	Mechanical engineering	Fast Learner	No Professional Experience. Interested In Electronics	Customer requirements

B Team Availability

Availability Schedule to Visit Client

Monday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle										■
Dustin			■	■	■					
Brandee	■	■								■
Tom										
Harry	■	■	■	■	■					■
Maciej			■	■	■					
JC										■
Scott			■	■						
Courtney					■	■	■	■	■	

Tuesday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle	■	■	■	■	■	■	■	■	■	■
Dustin	■	■	■	■	■					
Brandee	■	■								
Tom				■	■	■	■	■		
Harry	■	■	■	■	■	■	■	■	■	■
Maciej	■	■	■	■	■	■	■	■	■	■
JC						■	■	■	■	■
Scott	■			■	■					■
Courtney	■	■	■	■				■	■	■

Wednesday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle	■	■	■	■	■					■
Dustin			■	■	■		■			
Brandee	■	■								■
Tom										
Harry	■	■								
Maciej			■	■						
JC										■
Scott			■	■						
Courtney					■	■	■	■	■	■

Thursday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle							■	■	■	■
Dustin				■	■					
Brandee	■	■								
Tom										
Harry			■	■	■					■
Maciej				■	■					■
JC										■
Scott	■			■	■					■
Courtney	■	■	■	■				■	■	■

Friday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle										
Dustin							■			
Brandee										
Tom							■	■	■	■
Harry	■	■								
Maciej										
JC										
Scott										
Courtney	■	■								

Saturday	8 to 9	9 to 10	10 to 11	11 to 12	12 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Kyle										
Dustin										
Brandee										
Tom	■	■	■	■	■	■	■	■	■	■
Harry										
Maciej										
JC										
Scott										
Courtney	■	■								