

# Developing Web Applications for N.I.H.L.

Team IPRO 308

**IPRO** It takes a team!  
INTERPROFESSIONAL  
PROJECTS PROGRAM



# Introduction

- Sponsor: Northern Illinois Hockey League
- Scheduling Process
- Statistics Management



# Project History

- Previous work
  - Began Fall '09
  - Website was created
    - i. Basic website layout
    - ii. Preliminary match making algorithm



# Objectives

- Complete match-making algorithm
- Conduct usability testing
- Update/improve user interface
- Packaging and Deployment



# Team Development and Performance

- Team composed of various majors
- Sub-teams
  - Coding
  - User Interface
  - Usability



# Usability Team Accomplishments

- Conducted audience analysis
- Developed test procedures
- Recruited end users
- Conducted usability tests



# Findings

- Confusion with inconsistent date and telephone number formats
- Poor team filtering
- Dropdown boxes were found useful



# Recommendations

Recommendations	Importance
1. Complete scheduling functionality	High
2. Add confirmation page after data entry to verify input	High
3. Switch login to the left side of the screen	Medium
4. Fix inconsistent formats of phone numbers	Medium
5. Fix inconsistent formats of dates	Medium
6. Remove or edit the active checkbox	Low





# User Interface Accomplishments

- Improved design layout
- Dropdown lists
  - Multiple navigation menus to->
  - Single consistent navigation menu
- Sorting fields
- Team details page



# Before: Design Layout



Northern Illinois Hockey League

Login

Home

Stats

Schedule

Summary

Deadlines

Teams

Help

F.A.Q.

## NIHL Season Scheduling and Statistics

### Season Information

- 2009 Season is currently in Preparation phase.
- 233 teams registered.
- 1 game played.

### Reminders

You are not logged in.

### Recent Games

Game	Date and Time	Rink	Status	Score
<input type="checkbox"/> [Squirts Gold] Ice Dogs #1 v. [Mite Gold] Jets #1	Sep 30, 2009 09:20 PM	Glacier Ice Arena	Completed	2:1

### Quick Links

- Enter home rink schedule
- View match ups and schedule games
- View team statistics
- Browse upcoming games
- Browse recent games
- Read help pages

Copyright (C) 2009 Illinois Institute of Technology, Northern Illinois Hockey League

Help | Frequently Asked Questions | Contact League Administrators

**I PRO** It takes us better!  
INTERPROFESSIONAL  
PROJECTS PROGRAM



# After: Design Layout

Login 



- Home
- Standings
- Schedule
- Seasons
- Teams
- Clubs
- Divisions
- Rinks

## NIHL Season Scheduling and Statistics

### Reminders

Username   
Password   
[Lost your password?](#)

### Season Information

- **2009 Season** is currently in **Preparation** phase.
- **233** teams registered.
- **1** game played.

### Quick Links

- [View match ups and schedule games](#)
- [View team statistics](#)
- [Browse upcoming games](#)
- [Browse recent games](#)
- [Read help pages](#)

### Recent Games

Game	Date and Time	Rink	Status	Score
 <a href="#">[Squirts Gold] Ice Dogs #1</a> v. <a href="#">[Mite Gold] Jets #1</a>	Sep 30, 2009 09:20 PM	<a href="#">Glacier Ice Arena</a>	Completed	2:1

# Before: Sorting Fields

## Narrow Teams By

### Division

- Any Division -  
Mite  
Squirts  
Peewees

### Skill Level

- Any Skill Level -  
Bronze T1  
Silver T1  
Silver T2

### Club

- Any Club -  
Falcons Hockey Club  
Chicago Blues Hockey  
Sabres Hockey

### Team

- Any Team -  
Falcons #1  
Blues #1  
Sabres #1

Hold down "Ctrl" to select multiple items

Apply Filter

Clear Filter

## Team Statistics

Team	Level	Division	GP	Wins	Losses	Ties	PTS	GF	GA	+/-	SOG	TPM	GFA	AVG
Falcons #1	Elite	Mite	1	1	0	0	2	4	2	2	48	2.0	4.0	2.0
Blues #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Sabres #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Huskies #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Glenview #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Wilmette #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Ice Dogs #1	Elite	Mite	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0

# After: Sorting Fields



**Narrow Teams by Division**    **By Level**    **By Club**  
 - Any Division -    - Any Skill Level -    - Any Club -  
 Apply Filter    Clear Filter

- Any Division -  
 Mite  
 Squirts  
 Peewees  
 Bantams  
 test

**Key Club**

Team	Level	GP	Wins	Losses	Ties
Falcons #1	Elite	0	0	0	0
Falcons #2	Silver T2	0	0	0	0
Falcons #3	Bronze T2	0	0	0	0
Falcons #1	Elite	0	0	0	0

**Chicago Blues Hockey**

Team	Level	GP	Wins	Losses	Ties
Blues #1	Elite	0	0	0	0
Blues #2	Silver T2	0	0	0	0
Blues #3	Bronze T2	0	0	0	0
Blues #1	Elite	0	0	0	0

**Sabres Hockey**

Team	Level	GP	Wins	Losses	Ties
Sabres #1	Elite	0	0	0	0


**Huskies**

Team	Level	GP	Wins	Losses	Ties
Huskies #1	Elite	0	0	0	0



# Before: Team Details

## Team Detail: Falcons #1

Team Detail	
Team Name:	Falcons #1
Division:	Mite
Skill Level:	Elite
Season & Club	
Season:	2009 Season
Club:	Falcons Hockey Club
Team Manager	
Manager Name:	Robb Kremkow
Manager Email:	rkremkow22@yahoo.com [  Generate Invitation ]
Manager Phone:	



# After: Team Details

## Team Detail: Ice Dogs #1

### Win/Loss

**Games Won** 1  
**Games Lost** 0

### Recent Games

**Date** 09/30/2009 06:20 PM  
**Winner** Ice Dogs #1  
**Loser** Jets #1

### Upcoming Schedule

**Date** 2009-09-30 18:20:00  
**Type** Seeding Game  
**Rink** Glacier Ice Arena  
**Opponent** [Mite Gold] Jets #1

---

**Date** 2009-10-04 11:40:00  
**Type** Seeding Game  
**Rink** Glacier Ice Arena  
**Opponent** [Mite Gold] Redwings #1

---

**Date** 2009-10-21 18:20:00

### Team Detail


**Team Name:** Ice Dogs #1  
**Division:** Squirts  
**Skill Level:** Gold



### Season & Club

**Season:** Ice Dogs #1  
**Club:** Ice Dogs Hockey

### Team Manager

**Manager Name:** Lessa Drazner  
**Manager Email:** nihlapp@gmail.com   
**Manager Phone:**

### Team Coach

**Coach Name:** Steve Dubinsky  
**Coach Email:** sdubinsky@glacierhockeyzone.com  
**Coach Phone:**

[Create Team](#) | [Update Team](#) | [List Teams](#)



# Coding Team Accomplishments

- Completed match making algorithm
- Fix system's logic errors
  - Was not tested when system had little/no data
  - Creating new season -> system fails
  - Added logic so that system could handle minimal data





# Challenges Encountered

- Emulating stages of the hockey season
  - Unable to rollback to scheduling stage
- Usability tests
  - Attaining suitable number of testers
  - Varying locations
- Preparing website for deployment



# Ethical Issues

- Usability testing
  - Disclosing information obtained from test
  - Did not gather any identifying information
- Misrepresentation of final product to NIHL



# Future of Project

- Continue testing
- Package and deployment of final product
- System maintenance
- Customer service



# Questions?

