IPRO 307: Intermodal Container Transport System Solutions for Chicago Region
Fall 2007

1 Revised Objectives/Goals

1.1 Current Objectives Stated

The main objective of this IPRO has not changed: to produce a thorough site plan for the Gary rail yard, a computer program to communicate with truck drivers, and an encompassing business plan. The site plan will include:

- An overall site schematic
- A design for a bridge on Clark Road
- A design for the yard's visitor's center
- A zoning map of the area

1.2 Current Objectives Compared to Original Objectives

The only change to the Objectives was the addition of the zoning map to the site plan.

1.3 Reasons for Changes in Objectives Explained

We felt that a zoning map was necessary to include in the site plan because it is relevant to the business aspects of the intermodal yard and it had an effect on the placement of our features, such as the bridge and visitors' center. The rest of our objectives remain intact.

2 Revised Task Definition

2.1 Updated work Breakdown Schedule

Reference IPRO307_Midterm_Update.mpp for an updated WBS and Gantt Chart.

2.2 Updated Summary Tasks Defined

- Produce a site plan for the intermodal yard
- Design a bridge for Clark Road
- Design a visitor's center
- Refine Gary Wide Area Network system
- Draft a business plan
- Submit IPRO deliverables

2.3 Updated Individual Tasks Defined

The individual tasks have not significantly changed. The team is making progress according to the project plan and is on schedule to complete tasks as was described.

Because the layout and location of the site has already been determined, this IPRO will need to include its additions to the site plan and check that it meets zoning and other codes. The team has and will:

- Create a package summarizing the state of the project at the beginning of the semester for the developer
- Research other intermodal yards to get ideas and better understand the subject matter
- Draw up a report of the site plan, including what the team plans to add
- Create a zoning map

To produce a functional and aesthetically pleasing bridge, the team has and will:

- Research similar industrial-location projects to get ideas
- Determine the feasibility of widening the road to more than two lanes
- Brainstorm ideas and concepts for the bridge
- Determine which concept will be pursued
- Create drawings, reports, and other applicable deliverables

To produce a functional and aesthetically pleasing visitor's center, the team has and will:

- Determine the optimal location
- Brainstorm ideas and concepts for the building itself
- Determine which concept will be pursued
- Create drawings, reports, and other applicable deliverables

In order to submit a version of GWAN that will convey its potential advantages to the client, the team has and will:

- Study the scalability of the program and brainstorm possible expansions and improvements
- Integrate new ideas into program through coding
- Roughly conceptualize the truck stop, including integration of wifi for GWAN accessibility
- Improve the aesthetics and interface of the program

As this IPRO is cooperating with a sponsor and attacks a financially relevant real-world problem, the team has and will:

- Research business plans to gain knowledge in the field and prepare to create one

- Perform cost analysis on the proposed intermodal yard and determine fundraising opportunities
- Write a report featuring the business plan itself

The following IPRO Deliverables will be submitted:

- Syllabus
- Project Plan
- Midterm Report
- Midterm Presentation
- Website
- IPRO day presentation
- IPRO day poster
- IPRO day model
- CD_ROM
- Final Report
- Meeting Minutes

3 Revised Durations

3.1 Updated Hours Assigned to Tasks

Task Name	Estimated Time Commitment (in hours)
IPRO Deliverables	**230**
Project Plan	20*
Midterm Report	15*
Midterm Presentation	10*
Website	15
IPRO Day Presentation and rehearsal	100
IPRO Day Poster	10
IPRO Day Model	20
Final Report	40
Site Plan	**137**
Package for developer	2*
Research other sites	30*
Generate report of site plan	25
Check site design against codes	20*
Check bridge design against codes	15*
Check visitor's center design against codes	15*
Zoning Map	30
Bridge Design	**160**
Research similar projects	5*
Determine feasibility of widening road	20*
Design concepts	30*
Pick a design	5*
Make deliverables	100
Visitor's Center Design	**150**

Design concepts	30*
Pick a design	5*
Make deliverables	100
Determine location	15*
GWAN Development	**70**
Scalability study	20*
Integrate new attributes	25*
Truck stop design	10
Improve aesthetics	15
Business Plan	**140**
Research business plans	40*
Cost Analysis	50*
Formal writeup	50

A * indicates that the task has been completed as of this report. As such, these hour totals are not estimations.

3.2 Updated Individual Task Durations

Reference IPRO307_Midterm_Update.mpp for durations.

4 Revised Accountability

4.1 Sub Teams

(*denotes team leader)

- Site Planning Team
- Responsible for the site plan, zoning and code checking, and other tasks associated with the site plan (See §2)
  - Arnold*
  - Matt W
  - Christine
  - Renee
  - Peter

- Built Environment Team
- Responsible for bridge and visitor's center designs, deliverables, and associated tasks
  - Peter*
  - Savine
  - Marek
  - Jac
  - Matt W
  - Arnold

- Jim has since been more focused on the Business Team aspect of the project and has decided to devote his time there, as opposed to the Built Environment Team.

- Business Team
- Responsible for business plan, GWAN development, and associated tasks
  - Jack*
  - Jim
  - Zack
  - Matt S

- IPRO Deliverables Team
- Responsible for organizing, delegating, and compiling IPRO deliverables
  - Christine*
  - Jack

So far each member has successfully fulfilled their obligations to their respective team. Thus, with the exception of Jim moving solely to the Business Team, no changes have been necessary in the structure or scope of any team.

5 Revised Role and resource Allocation

The team originally budgeted $150 for a model of the site. Since then, the team has decided to go with a simpler model backed up by 3D computer renderings in both video and poster formats. This way, the team is able to present both an overview of the site and onsite views. While some factors (such as model attributes) still prevent an exact number, the team estimates about $100 to complete the model and posters.

In terms of time, each member of the IPRO team has been giving about eight hours a week and is expected to continue to do so throughout the remainder of the project.

6 Results to Date vs. Original Plan

6.1 Results to Date Described

Master Plan deliverables:

- Basic layout of multi-layer map
  - Color coded zoning layer
  - Ariel photographs of surrounding area
  - Improvements to produce higher levels of traffic
- Locate area for Visitor's Center
- Possible locations for distribution warehouse

Bridge Design deliverables:

- Schematic plan drawings
- Preliminary transverse and longitudinal sections
- Beginnings of 3-D computer animation

Visitor's Center Design deliverables:

- Schematic plan, section, and elevation drawings
- Programmatic and/or functional diagrams

Business deliverables:

- Functioning version of GWAN
- Web design interface of GWAN
- Preliminary business plan
- Building cost estimation

6.2 Deviations from Plans

With the prospects of CN (Canadian National Railway) buying the existing EJ&E Railway, our focus has shifted to the following: the design of the Clark St. Bridge, including both vehicular and pedestrian traffic; the design of the visitor's center; prospective areas for distribution warehouse.

6.3 Arguments and Evidence for Deviations

In an article posted September 27, 2007, Canadian National Railway announced its plan to purchase the existing EJ&E yard in Gary, Indiana.

http://www.nwitimes.com/articles/2007/09/27/updates/top_stories/doc46fb5d8fab486634362538.prt

6.4 Corrective Action Taken to Meet New Plan

Develop all appropriate drawings to represent such changes. 3-D models and animations will also be provided.

7 Monitoring of Project Status

7.1 Current Obstacles and Barriers

- Development of the IPRO Day 3-D animation
- Physical model

- Multi-layered zoning map
- Location of visitor's center

7.2 Future Obstacles and Barriers

- 3-D animation
- Unexpected delays
- Technological difficulties

7.3 Obstacle and Barrier Remedies

Communication and teamwork in order to fulfill IPRO deliverables in an efficient manner.

8 Code of Ethics

Please reference Code of Ethics posted on iKnow.