Enhanced Vision Systems

IPRO-355
Problem

- Mismarked / Unmarked Utility Lines
- Accidents lead to Loss of:
  - Lives
  - Time
  - Money
Solution

- A software product
  - Graphical Map
    - Location of buried utilities
    - Location of equipment operator

- Use by
  - Construction Equipment Operators
  - Utility marking services
Previous Work

- Fall 2007 – Augmented Reality
  - Informational commercial virtual reality device
- Spring 2008 – Augmented Reality
  - 3-D hardware & software
- Fall 2008 – Enhanced Vision Systems
  - 2-D top down view; hardware & software
Technology Sub-Team

Sub-Team Leader: Richard Hanley
Graphical Map

- Blue: Water Line
- Red: Power Line
- Yellow: Gas Line

Each square - 10x10 Feet
Product

GPS Hardware → USB port → GPS Interface → Utility Metadata Interface → Mapping Software → Display Terminal → Display

Utility Data
Test Environment

GPS Hardware

USB port

GPS Interface

Utility Metadata Interface

Mapping Software

Display Terminal

Display

Simulated Utility Data

Converter:

Turns Utility Data into Metadata
Risks / Issues

- **Scope**
  - Limited manpower and time
  - Jack of all trades, master of none

- **GPS Hardware**
  - Industry grade equipment is expensive
  - Protocols and accuracies are quite varied
Business Sub-Team

Sub-Team Leader: Julia Rybakova
Achievements

- **Marketing**
  - Target Customers
  - Value Proposition / Benefit Analysis
  - Product Features & Benefits

- **Financial**
  - Breakeven Analysis / Projected Cash Flows
  - Sales Forecast
  - Start-Up Expenses
In Progress

- Competitive Analysis
- Profit and Loss Projection
- Economic Outlook for Industry
- SWOT Analysis
- Market Research
Goals

- Return on Investment (ROI)
- Product Placement
  - Will eventually be part of Competitive Analysis
- Distribution Channels
- Promotion and Promotional Budget
- Conclusion
- Executive Summary
Sponsorship Sub-Team

Sub-Team Leader: Bogdan Bistriceanu
Goals

- **End Goals**
  - Obtain a sponsor or collaborator
  - Acquire funding

- **Incremental Goals**
  - Complete initial contacts
  - Conduct meetings
Achievements

- Scheduled a meeting with a VP at Navteq
- Initiated contact over 24 companies
- Created a sponsor presentation
- Presented at Rice Campus Engineers Week
Risks / Issues

- Risks
  - No sponsor interest
  - No sponsor obtained

- Issues
  - Current state of the economy
  - Competitors with similar products
Conclusion

Project Team Leader: Chuck Sticha
Goals

- Prototype
- Business Plan
- Sponsor or Collaborator
- Win
Effective Management

Sub-Team Accountability

Goal Oriented
Questions