Milestone Presentation

CS410 Fall 2007
Red Team

RED AI

(Restaurant Efficiency Decision Artificial Intelligence)
Welcome

Design / Plan Brief
  – Management
  – Evaluation
  – Marketing
  – Funding

Development Phases
  – Phase 0
  – Phase 1
  – Phase 2
  – Phase 3
  – Out Years

Summary
Part 1:
Welcome
As a Manager Do You Ever

Have patrons waiting in lines...
Get Complaints About...

Poor food production...
Or Hear About...

we waited
30 min
NO SERVICE

Slow Service ...
Have an inefficient restaurant
Efficiency $^{-1}$ = Loss of Money
Why We Need a Change

- 57-61% of restaurants fail within the first 3 years\(^1\)
- Restaurants make a 3-5% average net profit\(^1\)

![Bar Chart](chart.png)

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Profit</th>
<th>Wasted</th>
<th>Expense</th>
<th>Total Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restaurant 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restaurant 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restaurant 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Milestone
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RED AI
Restaurant Efficiency Decision Artificial Intelligence
The Restaurant's DB

DB Importer

Manual Input

RED AI's DB

Rule Set

AI

GUI

RED AI which is in the restaurant's computer
RED AI Will

- Collect / store restaurant data
- Highlight trends
- Allow simulations
RED AI Will Never

• Replace the manager (only a sidekick)

• Act without approval
Part 2:
Design Plan Brief
Management Plan
• Maintain clear lines of communication between team members

• Mutual aid in the review of individual work

• Allow early identification of schedule hazards
• Online Meetings
  – Sunday, Tuesday, Thursday @ 9pm

• Bull sessions
  – Monday, Wednesday following class
• Assigned weekly

• Progress reported daily

• Project Schedule Maintenance
  – Conducted on Wednesdays

• All weekly progress collaborated
Create Plans

Management Plan

- Evaluation Plan
- Resource Plan
- Risk Plan
- Funding Plan
- Marketing Plan
Each phase’s main deliverables will be measured by each part of the cycle.
Marketing Plan
• Independently-owned and non-franchised restaurants

• Why?
  – Do not have a tried and true model in place for efficiently running a restaurant

• Number of:
  – 70% of all restaurants are independent

• New restaurants (opened within the past 3 years)

• Why?
  – Relatively inexperienced and need assistance getting off the ground

• Number of:
  – 52 new restaurants opened daily in the United States
• 36% of 900,000 = 324,000 target restaurants.

• 3% buy a one year contract = $1.2M per year income
Our Niche

• Pre-packaged solution

• Low price point
• $100 per month for use of our software

• Why?
  – Affordable for target customer
    o In comparison, hiring one more worker at minimum wage costs about $1,240 per month

  – Low price point increases demand for our solution
When will we break even?

Thousands of Dollars

Years After “On Shelf”

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Funding Plan
Phase 1: Startup

- Grants.gov
  - Download Applications
  - SBIR Grants
  - Intelligent Systems Grants
  - Specialty Coffee Grants

- National Science Foundation
  - Grant Proposals
  - Application Guide
  - SBIR Contracts
Phase 2: Fast Track

- US Small Business Administration
  - SBIR Overview
  - SBIR Handbook
  - Loan Eligibility
  - SBA Loans

- US Department of Commerce
  - Loans & Grants
• Venture Capitalists & Angel Investor Groups
  – nvca.org
  – ventureworthy.com
  – fundinguniverse.com
  – usangelinvestors.com
  – MIT Angel Report
Part 3: Development Phases
Phase 0
(Product Conception)
Deliverables

- Problem
- Feasibility
- Milestones
- SBIR
- Final Presentation
- Web Site
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Please see WBS Outline packet for details
Staffing: Organization

Project Manager
Alexander Caulkins

Finance and Documentation
Brian Terribile

Marketing and Support
David Harris

Hardware
Matthew Crainer

Software
Patrick Bourque

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Phase 1
(Proof of concept)
Deliverables

- Project Papers
- SBIR II
- Prototype Requirements
- Prototype I
- Prototype II
Milestones

Phase 1

Papers
- descriptive / persuasive
- specifications
- test plan
- user manual

SBIR II
- research
- extras
- write
- proof

Prototype Requirements
- research
- write
- proof
- submit

Prototype I
- hardware

Prototype II
- hardware
- software
- AI
- presentation

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Please see WBS Outline packet for details
Prototype 1: MFCD (Hardware)
Prototype 1: MFCD (Software)
Prototype 2: MFCD (Hardware)

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Staffing

Project Manager
Alexander Caulkins

Finance and Documentation
Brian Terribile

Marketing and Support
David Harris

Hardware
Matthew Crainer

Software
Patrick Bourque

Cluster Expert
Jay Morris

AI Expert
Dennis Ray

DB Expert
Irwin Levinstein

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Please see Resource packet for more details
## Budget: Phase 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard</td>
<td>$8,646.19</td>
<td>N/A</td>
<td>$8,646.19</td>
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<tr>
<td>Staff</td>
<td>$48,469.23</td>
<td>$19,387.69</td>
<td>$67,856.92</td>
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</table>

**Total** $76,505.11
Phase 2
(Production Model Development)
Deliverables

- Infrastructure
- Marketing Research
- Testing
- Potential Investors
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Please see WBS Outline packet for details
## Budget: Phase 2

<table>
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<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
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<td>Hard</td>
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<td>Staff</td>
<td>$262,910.56</td>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
<td><strong>$368,074.78</strong></td>
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</table>

### Milestone

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### Breakdown

- **Infrastructure**: $63,800.00
- **Marketing Research**: $49,857.69
- **Testing**: $80,406.72
- **Potential Investors**: $25,261.54

Total: $368,074.78
Phase 3
(Production)
Deliverables

- Production
- Marketing
- Ads
- Documents
- SELL
- Production to implementation

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Please see WBS Outline packet for details

Phase 3

production
- Build optimized version
- Create CD
- Create Package
- Finalize website
- Setup Phone System

Marketing
- Retail
- Internet
- TV

Documents
- end user contracts
- Manual

SELL
- Upload
- Setup store back end
- Product online
- send to stores
- product on shelf
- Product launch event

production to implementation
- analyze project
- disband the extras

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# Budget: Phase 3

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Hard</td>
<td>$3,600.00</td>
<td>N/A</td>
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<tr>
<td>Staff</td>
<td>$124,868.10</td>
<td>$49,947.24</td>
<td>$174,815.34</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>$178,415.34</strong></td>
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</table>

### Milestone

November 14, 2007
The Out Years
Part 4: Summary
Total Cost = $622,995

- Phase 1: $368,075
- Phase 2: $178,415
- Phase 3: $76,505

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• There are 433 tasks in RED AI

• We will employ 23 people

• Official start date was on August 28, 2007

• Scheduled “On Shelf” date is November 3, 2009
Appendixes
Funding

- http://www.nsf.gov/funding/
- http://www.nsf.gov/pubs/policydocs/pappguide/nsf08_1/gpg_index.jsp
- http://grants.nih.gov/grants/forms.htm#contracts
- http://www.grants.gov/
- https://apply07.grants.gov/apply/forms_apps_idx.html
- http://www07.grants.gov/search/search.do;jsessionid=H1qLn0pv56IrVQd28ydxYRmPbT3fThZDd5CCMMMGVQLz2LJ2ks01!1866823308?opplD=15264&flag2006=true&mode=VIEW
- http://www07.grants.gov/search/search.do;jsessionid=H1sRKMhHrvVGTQKvM5Rb2p2Xrpq1TtJJ8p66TXglyk9jHz90dv61866823308?opplD=14972&flag2006=true&mode=VIEW
- http://www07.grants.gov/search/search.do;jsessionid=H1sRKMhHrvVGTQKvM5Rb2p2Xrpq1TtJJ8p66TXglyk9jHz90dv61866823308?opplD=14913&flag2006=true&mode=VIEW
- http://www.sba.gov/
- http://www.sba.gov/gopher/Innovation-And-Research/SBIR-Pro-Prep/
- http://www.commerce.gov/
- http://www.osec.doc.gov/osdbu/FAQ.htm#loans
- http://www.nvca.org/
- http://www.ventureworthy.com/
- http://www.fundinguniverse.com/services/
- http://usangelinvestors.com/funding.html

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• http://www.google.com/search?hl=en&safe=off&q=restaurant+efficiency+AI