

IPRO 316

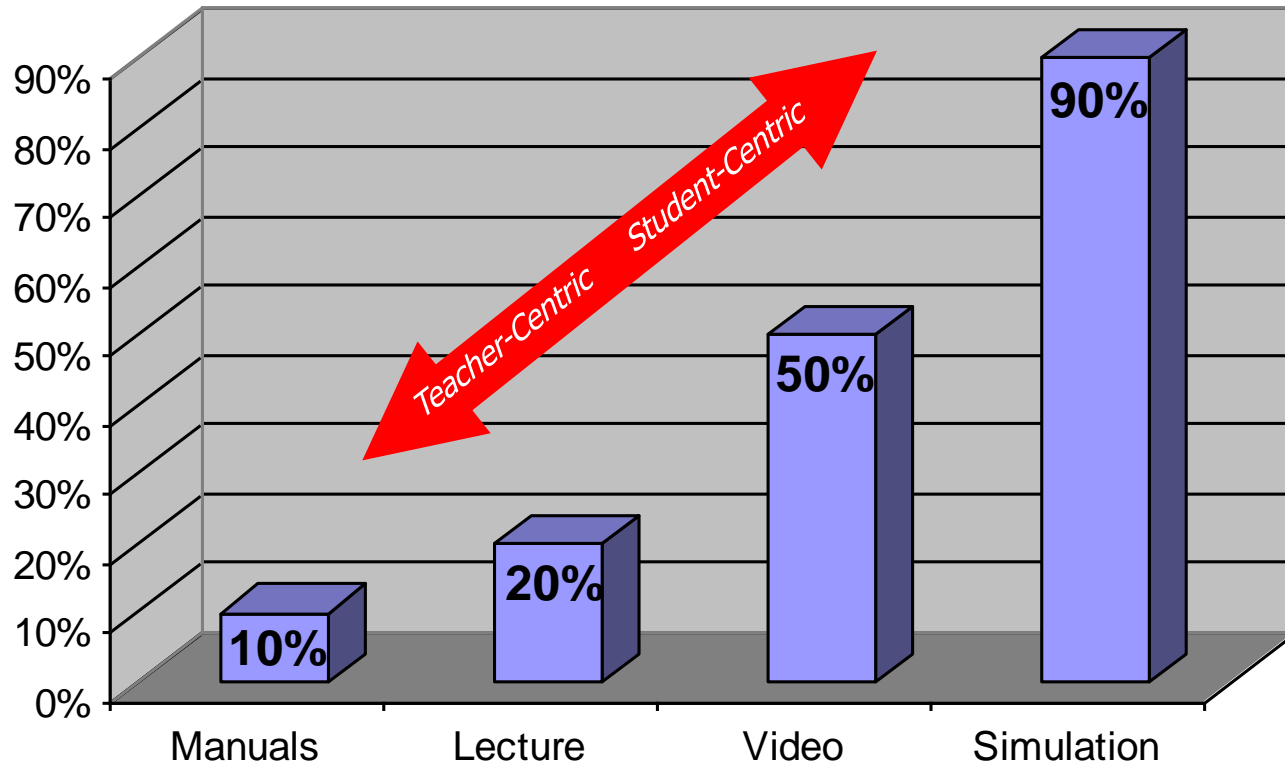
“New Applications in Virtual
Reality Training”

Fall 2007

Product Animations

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Learning Effectiveness (Understanding & Retention)





Objectives

Objective 1: Market research into highly customizable and mass market (.asp model) application of PAI product.

Objective 2: Determine screening criterion and select best prospects

Objective 3: Quantify value propositions for products selected from Objective 2

Objective 4: Create a deliverable simulation example

Objective 5: Recommendations for future work on this IPRO

Objective 2b: Research the idea/design of a “prototype” .asp site

Objective 3b: Test the .asp website for security and function.

Objective 4b: Use milkshake or other machine to show application of the .asp.

Criteria for New Products

- ◆ Specialized Techniques, difficult/complex to operate
- ◆ High cost from lost time, trainer time and/or safety
- ◆ Multi-use, Multi-purpose equipment
- ◆ User turnover, expensive operator
- ◆ Routine practices

- ◆ *Service industry training for smaller applications utilized by many people.*

Objectives

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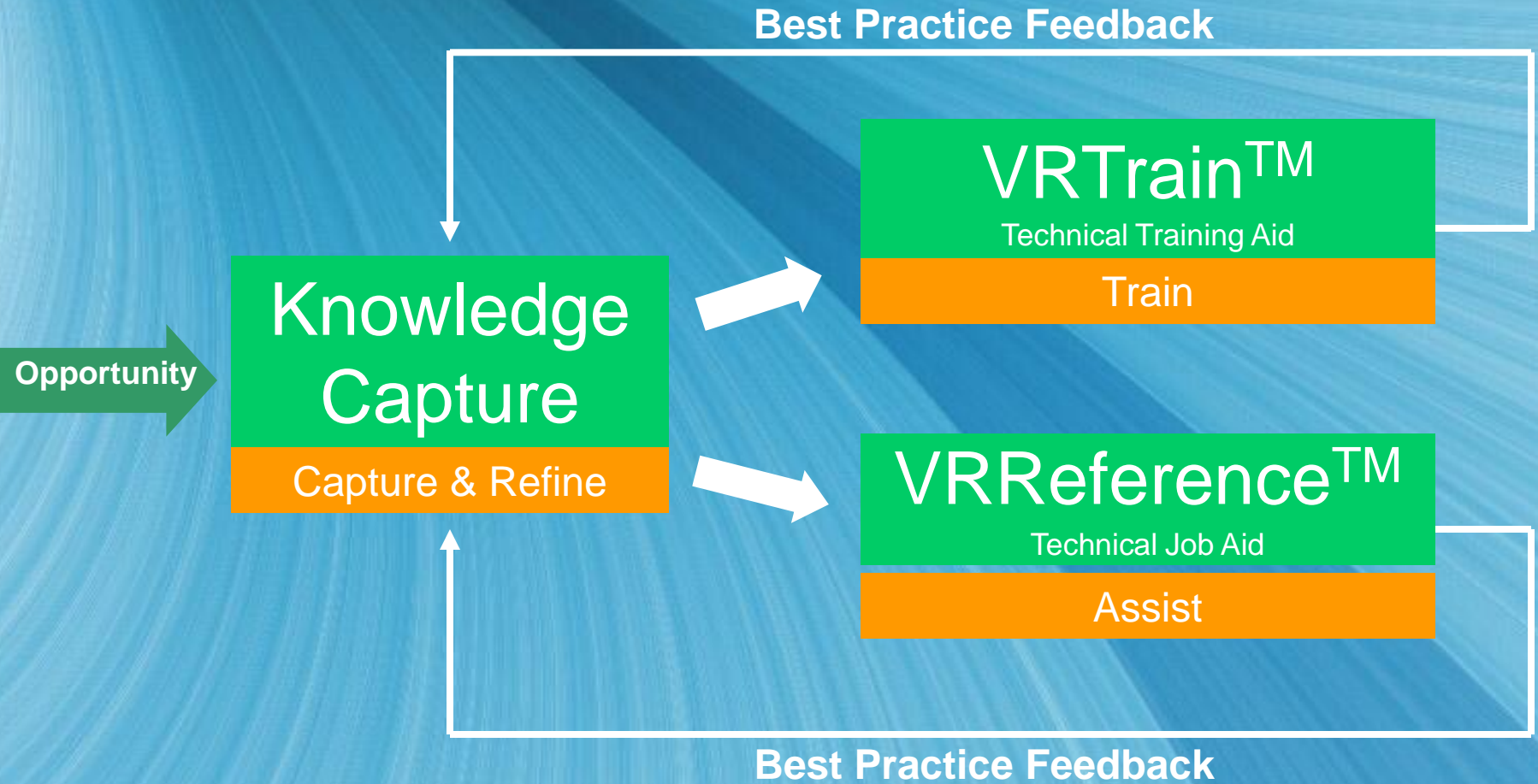
Objective 5: Recommendations for future work on this IPRO

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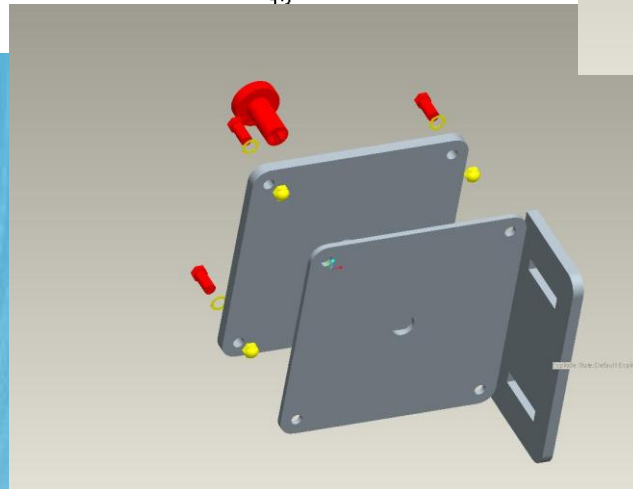
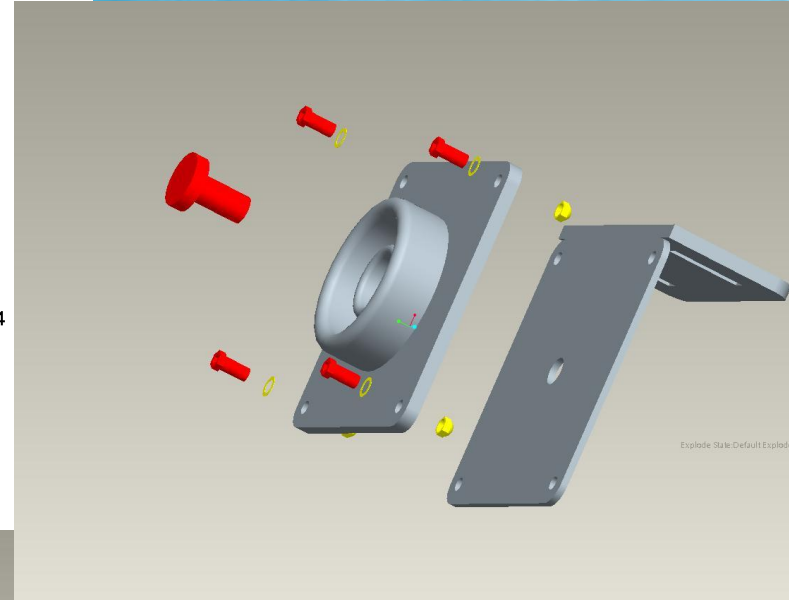
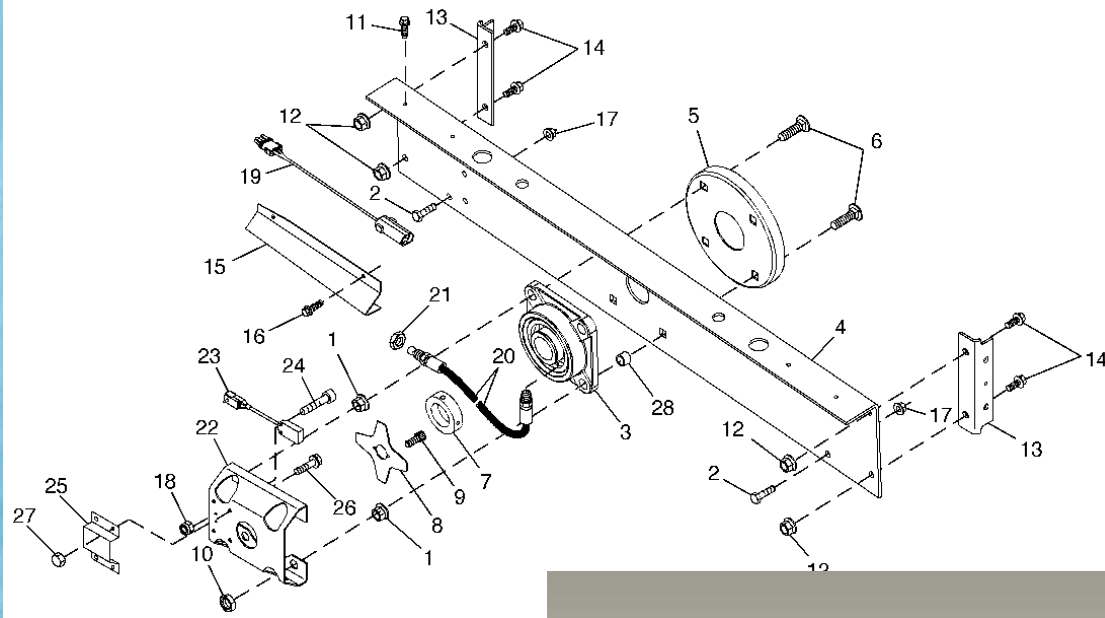
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From Opportunity to Product



From Opportunity to Product



Initial Research Topics

Trade School Applications

ASP development

Agricultural equipment > use, maintenance, production

Food packaging and processing industry

Computer/microchip processing

Nuclear Power Plants

Do it yourself, home improvements.

Heavy Manufacturing

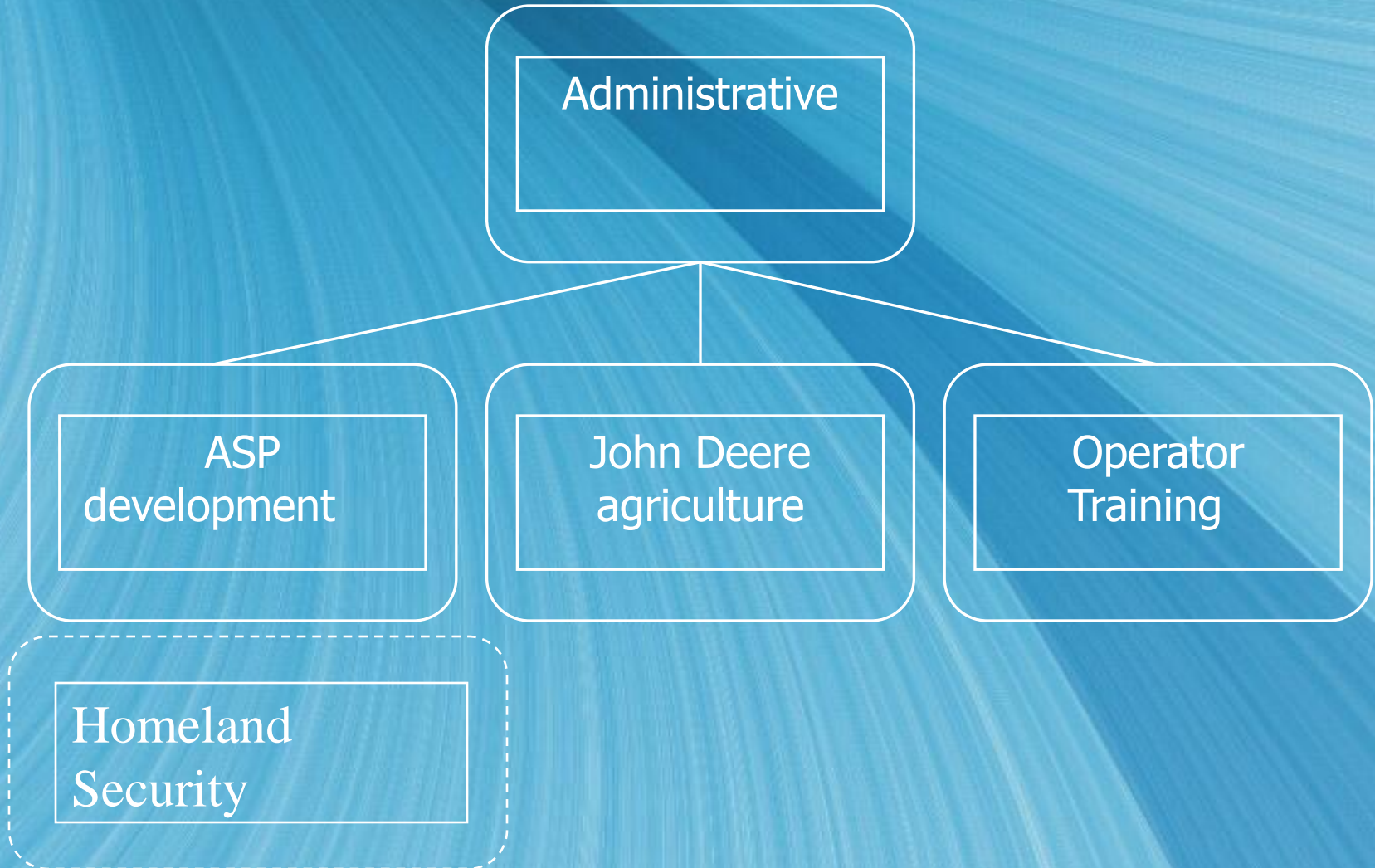
Energy Industry

Construction

Military

Online Lab

Sub-Teams





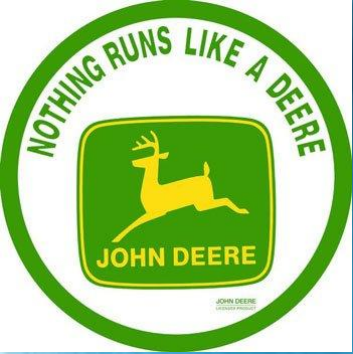
JOHN DEERE

John Deere Agriculture

Team Members

- ◆ Erik Doolittle
- ◆ Jeong Shik Kim





Why John Deere?

- ◆ Multi-purpose machinery
- ◆ User turnover
- ◆ High cost/yield company and product
- ◆ Specialized technology



The Necessity

- ◆ Harvesting downtime due to maintenance
 - ◆ Lost product -> lost income
- ◆ Only option: Leasing machinery
 - ◆ Availability
 - ◆ High cost
- ◆ Evident need: John Deere University/Parts





vs.



- ◆ JDU:
 - ◆ Glorified, enhanced manual
 - ◆ Non technical
 - ◆ Restricted to online use
 - ◆ Minimal visuals
- ◆ PAI:
 - ◆ Highly detailed
 - ◆ Easily integrated
 - ◆ Applicable on various levels
 - ◆ Maximizes retention

Conclusion

John Deere farming equipment provides a strong value proposition for Product Animations, as reinforced by the recent additions of JDU and JDParts.



Operator Training

- ◆ **Team Members**
 - ◆ Nick Cantoni
 - ◆ Erik Mead

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Contacts

- ◆ IUOE = International Union of Operating Engineers
- ◆ Trade union that primarily represents Operating Engineers
- ◆ Steve Brown Director of Training for IUOE.
- ◆ Power Construction- David Baker, VP of External Affairs

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Benefits

- ◆ Allows for quicker training of clients by up to 30%
- ◆ Money is saved on rental of machines because it's faster
- ◆ Ability to teach larger classes at once
- ◆ Can be used as a continuous training method

ASP Team

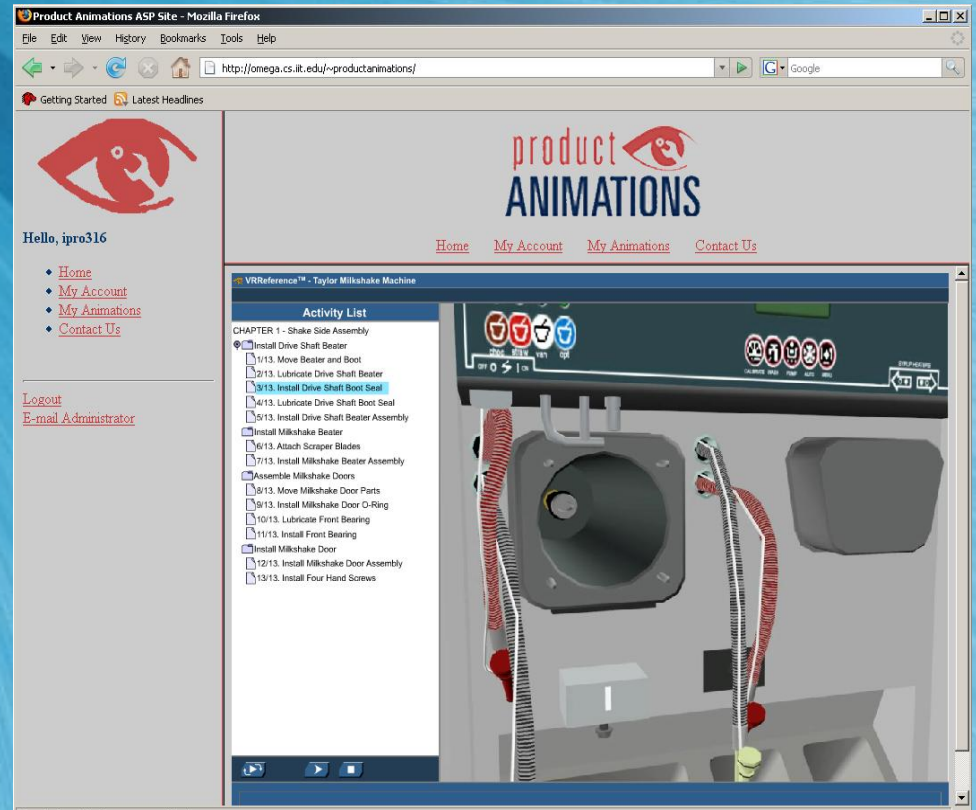
- ◆ **Team Members**
 - ◆ Mark Malanowski
 - ◆ Kyle Knopp

ASP Goals

- ◆ ASP = Application Service Provider
- ◆ Investigate the Web as a means to deliver PAI product
 - ◆ Greatly expands potential client base
 - ◆ Reduces cost of software distribution
 - ◆ Provides 24x7 availability
- ◆ Search for a suitable business model or design our own
- ◆ Define screening criteria for ASP-compatible application
- ◆ Conduct market analysis and find potential competitors
- ◆ Write design of a PAI ASP website

ASP Subteam Results

- ◆ Goals of ASP design:
 - ◆ Security
 - ◆ Flexibility
 - ◆ Robustness
- ◆ Implemented design
- ◆ Proof-of-concept
- ◆ Conclusion:
 - ◆ Great opportunity to enter new markets



<http://omega.cs.iit.edu/~productanimations>

Just-in-Time training for Homeland Security/Emergency Response Application

- ◆ Team Members
 - ◆ Shane Steward
 - ◆ Ah Reum Jeong

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What we did

- ◆ Researched emergency response training such as:
 - ◆ Evacuation of a building/city
 - ◆ Setting up an emergency command center
 - ◆ Setting up an emergency medical tent
 - ◆ Etc.

What we found

- ◆ The Red Cross has lots of training programs
 - ◆ All programs found were focused on the family or individual
- ◆ Various training programs for Emergency Response
 - Citizen corps
 - Community Emergency Response Training
 - Medical Reserve Corps
 - Volunteer Training

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Benefits

Trainers – State, Government and organizations

- ◆ Training time saving
- ◆ Support various situations from hazmat to natural disaster

Trainees – Citizen, Volunteers

- ◆ Ease of access
- ◆ Effective training
 - People can go through similar experience

Questions

