IPRO 338
Improving Electrical Efficiency With Building Information Modeling (BIM)
Sponsored By :
ECA

Background

Sponsored by Electrical Contractors Association (ECA)

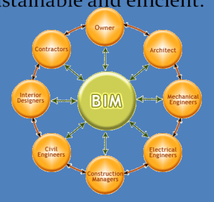
- Members of ECA are experienced contractors in the electrical construction industry throughout Chicago, who offer/provide quality and cost effective services.

IPRO 338's purpose is to identify ways to improve the efficiency of electrical contracting projects through Building Modeling (BIM) utilization.

Organization of Team

What is BIM?

Building information modeling is an architectural 3D model drawing. It is used for coordination for a project design and construction. BIM creates a 3D digital representation of the project, which helps for decision making, construction planning, performance predictions and cost estimates. It also keeps the project up to date to keep everyone involved in the project. Overall BIM purpose is make a project more sustainable and efficient.



Objectives

- To summarize the main sources of the inefficiency in the electrical contracting field
- To access possible solution of inefficiencies, especially Building Information Modeling
- To gain an understanding of technologies such as BIM, with the goal of teaching them to electrical contractors
- To devise and implement a plan for distributing the team's recommendations for improving efficiency to electrical contractors

BIM User Guide

Benefits Team

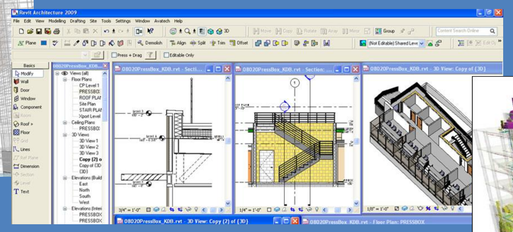
- Research the Benefits of BIM (Cost and Time)
- Who is BIM for?
- Put together BIM Guide

Implementation Team

- Costs of BIM (Training and Implementation)
- Step by Step training
- Draw backs and problems from the past
- Put together Brochure and Poster

Content Team

- Introduction to User Guide
- Work on deliverables of the IPRO
- Put together final report



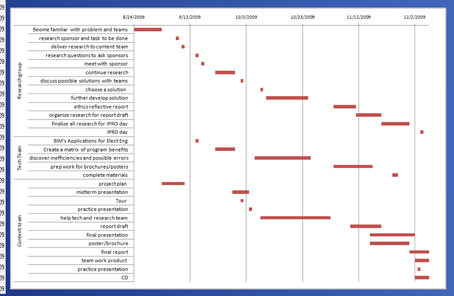
Why BIM?

- Cuts the amount of draftsmen, allows multiple projects at a time
- Prefabbing allows you to lay piping within BIM at a much faster rate than on the job, which minimizes errors and improve efficiency
- BIM is a straightforward program: the ability to place components and edit them as the project progresses saves and enormous amount of time
- BIM Instant Schedule sheets count and account for every item, and are formatted, ready to be placed into the drawing set

Gantt Chart

Project Management - Gantt Chart

	Tasks	Start Date	Duration (days)	End Date
Research group	Become familiar with problem and teams	8/24/2009	10	9/3/2009
	research sponsor and task to be done	9/8/2009	1	9/9/2009
	deliver research to content team	9/10/2009	1	9/11/2009
	research questions to ask sponsors	9/15/2009	1	9/16/2009
	meet with sponsor	9/17/2009	1	9/18/2009
	continue research	9/22/2009	7	9/29/2009
	discuss possible solutions with teams	10/1/2009	1	10/2/2009
	choose a solution	10/8/2009	1	10/9/2009
	further develop solution	10/10/2009	15	10/25/2009
	ethics reflective report	11/3/2009	8	11/11/2009
	organize research for report draft	11/11/2009	9	11/20/2009
	finalize all research for IPRO day	11/20/2009	10	11/30/2009
	IPRO day	12/4/2009	1	12/5/2009
Tech Team	BIM's Applications for Elect Eng	9/15/2009	1	9/16/2009
	Create a matrix of program benefits	9/22/2009	7	9/29/2009
	discover inefficiencies and possible errors	10/6/2009	20	10/26/2009
	prep work for brochures/posters	11/3/2009	14	11/17/2009
	complete materials	11/24/2009	2	11/26/2009
Content team	project plan	9/3/2009	8	9/11/2009
	midterm presentation	9/28/2009	6	10/4/2009
	Tour	10/1/2009	1	10/2/2009
	practice presentation	10/4/2009	1	10/5/2009
	help tech and research team	10/8/2009	25	11/2/2009
	report draft	11/9/2009	11	11/20/2009
	final presentation	11/16/2009	16	12/2/2009
	poster/brochure	11/16/2009	14	11/30/2009
	final report	11/30/2009	7	12/7/2009
	team work product	12/2/2009	5	12/7/2009
	practice presentation	12/3/2009	1	12/4/2009
	CD	12/2/2009	5	12/7/2009



Acknowledgements

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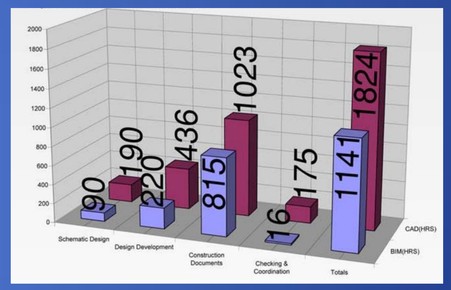

Costs