cfunited
the premier coldfusion technical conference

Managing CF projects from start to finish

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President, BlueBrick

About me

```
<CFSET CurrentTitle =“President, BlueBrick Inc.”>

<CFSET experience_YY = 15 >
<CFSET experience_CF = 10>

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<CFSET aTitles[1] = “Adobe Certified Instructor”>
<CFSET aTitles[2] = “Adobe Community Expert”>
<CFSET aTitles[3] = “Manager, NYFLEX user group”>
<CFSET aTitles[4] = “Speaker, CFUNITED, Max..”>
<CFSET aTitles[5] = “Author, CF Developer’s
    Handbook, CFDJ”>

<CFSET Mom = “Very Proud”>
```

Agenda

- ✓ Project Buzzwords & Myths
- ✓ Reasons for Failure
- ✓ Project Success - A Common Sense Approach
- ✓ Q&A

Project Buzzwords & Myths

Project Buzzword Bingo

Process BINGO	On Time BINGO	Framework BINGO	Empower BINGO
Teamwork BINGO	Consensus BINGO	Methodology BINGO	Synergy BINGO
Standards BINGO	Best Practices BINGO	Cutting Edge BINGO	Win Win BINGO
On Budget BINGO	Outside the box BINGO	Project Manager BINGO	Best of Breed BINGO

“Process”

"Our unique process empowers our best-of-breed team, delivering results on time on budget."

Buzzwords - “Process”

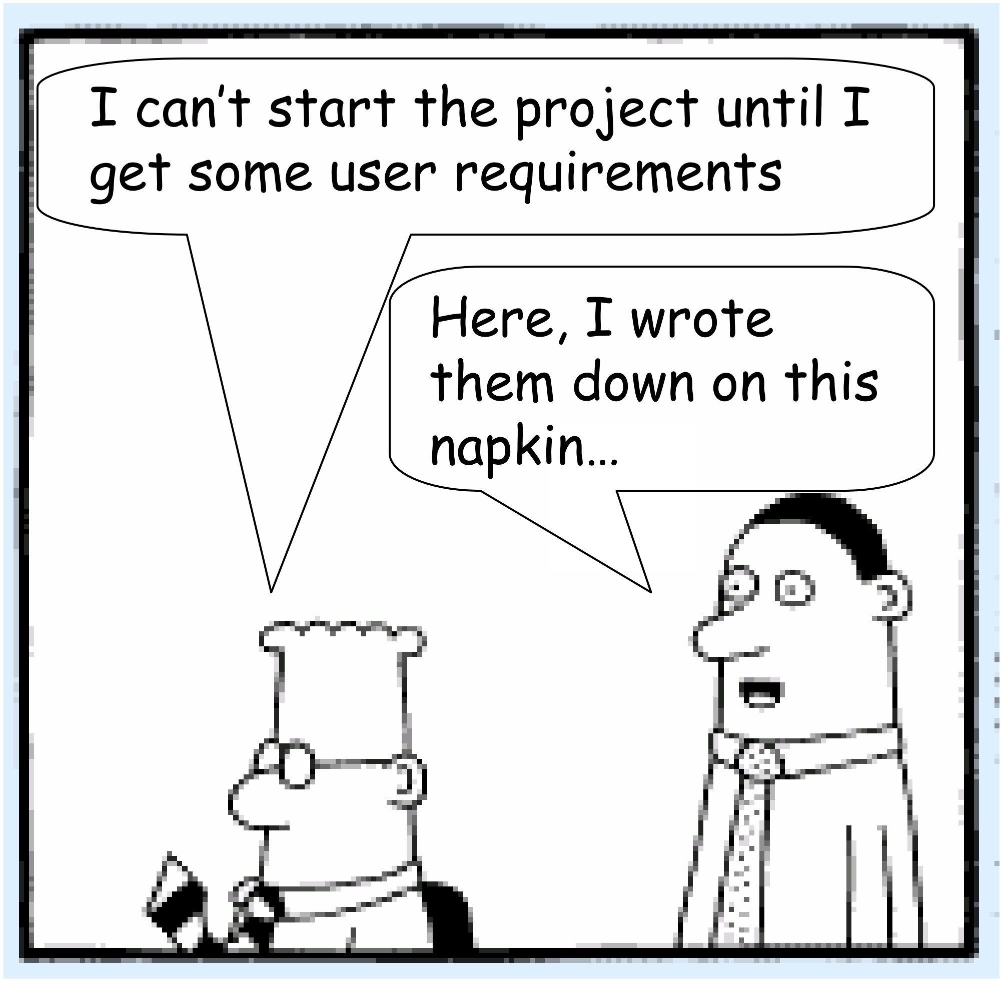
- ✓ 4 Step, 5 Step, 12 Step…
- ✓ Who designed your process?
- ✓ Do you actually follow that process?
- ✓ When did you last update your process?
- ✓ How complex/abstract is your process?

“Standards”

Standards

- ✓ Do you have coding standards?
  - http://livedocs.adobe.com/wtg/public/
- ✓ Do you enforce/check coding standards ?
- ✓ Do they actually matter?

“Requirements”


I can't start the project until I get some user requirements
Here, I wrote them down on this napkin…

Buzzwords – “Requirements”

- ✓ Do you have enough requirements before you start coding?
- ✓ Can you have too much?
- ✓ Are they consistent?
- ✓ Can your requirements change?
- ✓ Are they simple to understand?
- ✓ Are they communicated ?

“Project Managers”

Buzzwords – Project Managers

- ✓ Project Managers are overrated
- ✓ Project Leader vs. Project Reporter
  - Vision
  - Determination
  - Optimism

“On Time, On Budget”

Buzzwords – “on time and on budget…”

✓Nearly **a third** of IT projects **were CANCELED** before they could be completed.

✓ Over **half** of the projects cost almost **TWICE as much** as their **original approved budget**

“Teamwork”

Buzzwords – “Teamwork”

- ✓ Hierarchies can easily inhibit communication
- ✓ A development team is as strong as the strongest link.

“Consensus”

Buzzwords – “Consensus”

- ✓ Too much time and energy spent on consensus
- ✓ Great tool for Avoiding Accountability
- ✓ Promotes management by committee, slows development

Reasons for Failure

Famous *first* words

"We won't make as many mistakes on this project as we made on our last project.."

Famous *first* words

"We weren't stupid yesterday.."

Famous *first* words

"Fewer things will go wrong on this project than our last project..."

Famous *first* words

"We'll be a lot more productive this time than we were last time.."

Famous *first* words

Reasons for Failure

- ✓ In software, **past performance** is your ***best indicator*** of **future performance**

- ✓ "**Project success** is determined in the **first month**"

Project Success Factors

1. User Involvement	20
2. Executive Management Support	15
3. Clear Statement of Requirements	15
4. Proper Planning	10
5. Realistic Expectations	10
6. Smaller Project Milestones	10
7. Competent Staff	5
8. Ownership	5
9. Clear Vision & Objectives	5
10. Hard-Working, Focused Staff	5

The CHAOS Report , Standish Group

Project Success

Before You Start

- ✓ Define and Communicate Process
- ✓ Define and Communicate Standards
- ✓ Define and Communicate Resources

Before You Start – Define Process

- ✓ Clearly written and communicated
- ✓ Simple to follow
  - High Level Process instead of procedures and forms
- ✓ Adapt your process , not your developers

Before You Start – Define Standards

- ✓ Clearly written and communicated
- ✓ Define Compliance and Constraints
- ✓ Adjusted per Project

- ✓ If it is not written, communicated and understood , it is not a standard.

Before You Start – Define Resources

- ✓ Hardware List
- ✓ Software List
  - ▪ Development tools
  - ▪ Third Party Libraries
  - ▪ Version Control
  - ▪ Testing tools
  - ▪ Bug/Defect Tracking
- ✓ Third Party Resources

Discover - A Clear Vision

- ✓ Storyboarding / Wireframes / Prototypes
  - The Topic
  - The Classifications
  - The Specific Ideas
- ✓ User Personas/ Scenarios
- ✓ Evolving Simplified Documentation
  - Wiki
  - Email 2 Wiki
- ✓ Success Metrics

Discover – A clear vision

- ✓ Alice: “Would you tell me please, which way I ought to go from here?”
- ✓ CC: “That depends a good deal on where you want to get to.”
- ✓ Alice: “I don’t much care.”
- ✓ CC:“Then it doesn’t matter which way you go.”
- ✓ *Alice:* “*-So long as I get somewhere*”
- ✓ CC: “*Oh, you're sure to do that, if you only walk long enough*”

Discover – Common Mistakes

- ✓ Assuming the client understands you
- ✓ Assuming you understand the client
- ✓ Assuming the client won’t change their mind

Project Success – Plan

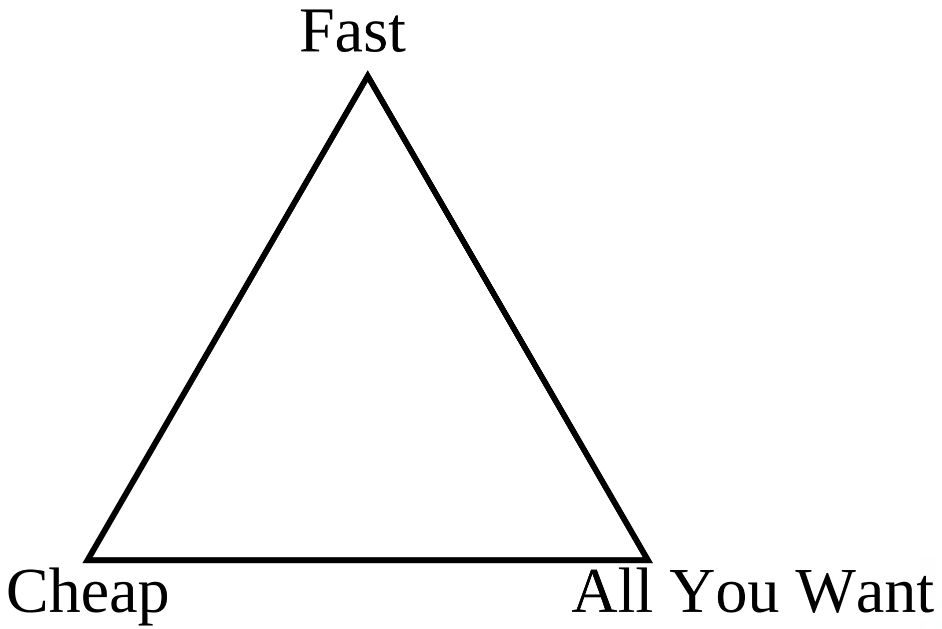
I FINISHED THE PROJECT PLAN WITHOUT YOUR INPUT.
YOU WOULD HAVE LIED TO ME ANYWAY, SO I JUST SKIPPED THAT STEP.
I'VE ALREADY ASSIGNED BLAME FOR FAILURE, BUT DON'T WORRY, IT'S JUST PRELIMINARY.
© 2000 United Feature Syndicate, Inc.

Plan

- ✓ Written down and communicated
- ✓ Establish Communication Protocols
- ✓ Includes Risks
- ✓ Don’t forget your test plan
- ✓ Backup and Recovery Plan

Plan – The triangle

- ✓ The "Iron Triangle"
  - Schedule
  - Cost
  - Scope



Plan – The triangle

- ✓ Your Client always wants all three
- ✓ Some add “Quality” , “Process” to create a pyramid
  - http://www.maxwideman.com/musings/irontriangle.htm
  - http://www.ambysoft.com/essays/brokenTriangle.html

Plan – Common Mistakes

- ✓ Too Much Detail
  - "Create a page showing employees, using <CFQUERY>"
- ✓ Not enough Detail
  - "Task 1: Create Website"
  - "Task 2: Collect Payment"
- ✓ Project and Product summary
  - Plain English
  - Who's who

Plan – Answer the following questions

- ✓ What Are You Gonna Get?
  - The specification of what the final product or service will be capable of doing
- ✓ By When?
  - The timetable of when the client can expect to be able to see and evaluate specific parts of the finished product
- ✓ How You Gonna Get there?
  - The top-level plan for how everything is going to be done and how it will all fit together
- ✓ How Much It Gonna Cost?
  - The budgets associated with those timetables

Plan – What are you going to get?

- ✓ Clients don’t really read/react to:
  - UML
  - Diagrams
  - Specs
- ✓ Clients actually read/react to:
  - Screenshots
  - Prototypes

Plan – By When

- There are three major ways projects are scheduled:
  - Top-down
  - Bottom-up
  - Dictated release date.

Plan – How you going to get there?

- ✓ Differentiate the major tasks from the little stuff
- ✓ Group minor related tasks under the major tasks.
- ✓ Sequence the major tasks into logical progression.
- ✓ Figure out who’s going to do which task(s) and their constraints.
- ✓ Present project plan to team
  - Always easier to react to a plan than to build one.

Plan – How much is it going to cost?

More than you planned

Plan - Evolving Project Plan

- ✓ Strategic Methodology

  &

  Tactical Plan

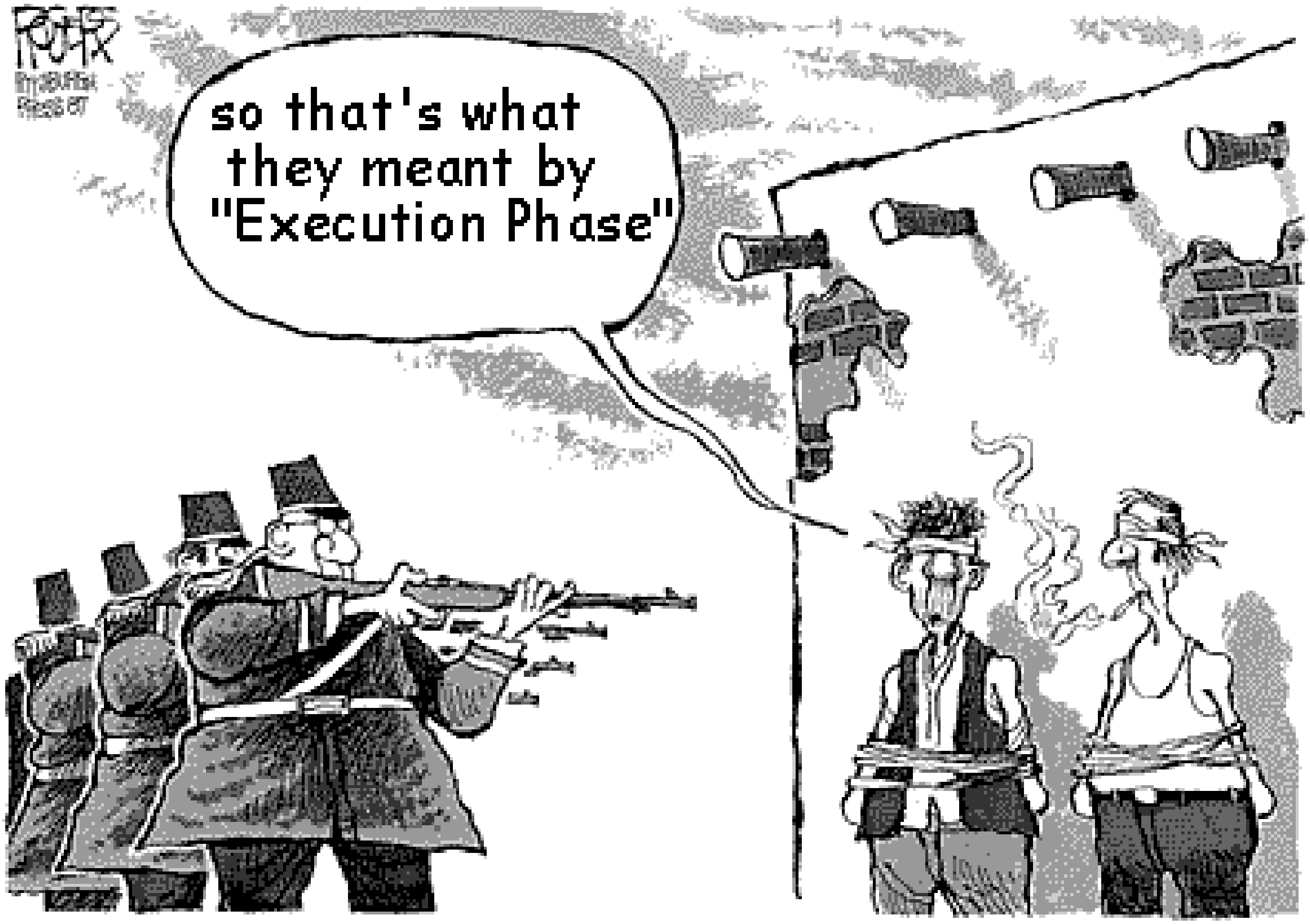
- ✓ Prepare for change, “Murphy Rules”
- ✓ Beware of the “Fudge Factor”
- ✓ Parkinson’s Law

Plan – Don’t forget ..

- ✓ The ANTI-Requirements
  - Security
  - Functionality

- ✓ Performance Metrics

Develop – Executing the Plan



Develop – Famous Last Words

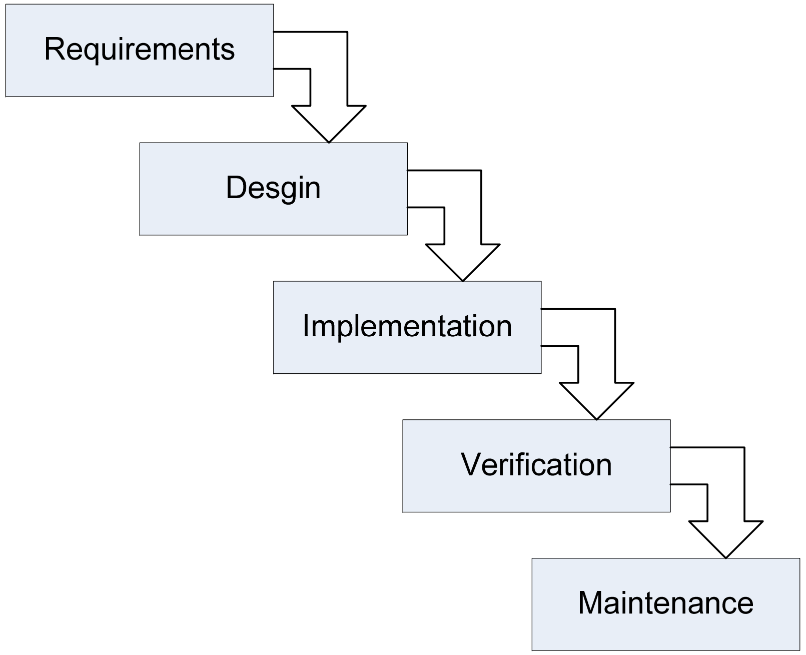
- ✓ "I'll patch it for now, and create the reusable component later…"
- ✓ "We only need to use this once…"
- ✓ "Can you throw together a quick prototype? Don't worry … we won't use it in production this time"

Develop – The Magic Solution ?

- ✓ So what is the magic solution ?
  - Waterfall ?
  - RAD?
  - RUP?
  - XP?
  - Agile?
  - FliP?

Develop – Waterfall model

- ✓ BDUF – Big Design Up Front
- ✓ Emphasis on Documentation
- ✓ Well suited for HUGE projects



Develop - RAD

- ✓ Rapid Application Development
  - Iterative Development
  - Using rapid prototyping and CASE tools
  - Increased speed of development
  - Decreased complexity
  - Emphasis on simplicity and usability
- ✓ Often reduced features due to time boxing
  - Time boxing – Splitting a project into mini-projects

Develop - Rational Unified Process

- ✓ Both a framework and a Product
  - Rational Software (Now IBM)
- ✓ Four Phases
  - Inception, Elaboration, Construction, Transition
- ✓ Disciplines
  - Engineering (Requirements, Design, Test…)
  - Supporting (Configuration, PM, Environment ..)

Develop – Extreme Programming

- Values
  - Communication
  - Simplicity
  - Feedback
  - Courage
  - Respect
- Practices
  - Pair programming
  - Test Driven Development
  - Continuous process…

Develop - Agile

- ✓ Principles
  - Rapid, continuous delivery of useful software (weeks)
  - Working software is THE measure of progress
  - Changes are welcomed
  - Close, Daily, cooperation between business and developers
  - Face-to-face conversations
  - Simplicity
- ✓ Manifesto
  - **Individuals and interactions** over processes and tools
  - **Working software** over comprehensive documentation
  - **Customer collaboration** over contract negotiation
  - **Responding to change** over following a plan
- ✓ SCRUM

Develop FLiP

- ✓ Fusebox Lifecycle Process
  - http://www.fusebox.org
  - http://www.halhelms.org
- ✓ Process
  - Personas and Goals
  - Wireframe
  - Prototype
  - Application Architecting
  - FuseCoding
  - Unit Testing
  - Application Integration
  - Deployment

Develop – Cowboy Coding

“Process ?!

we don’t need no stinkin’ process”

Develop – Common Mistakes

- ✓ <u>Phase Isolation – “Plan, then do”</u>

Discover	**Plan**	**Develop**	**Test**

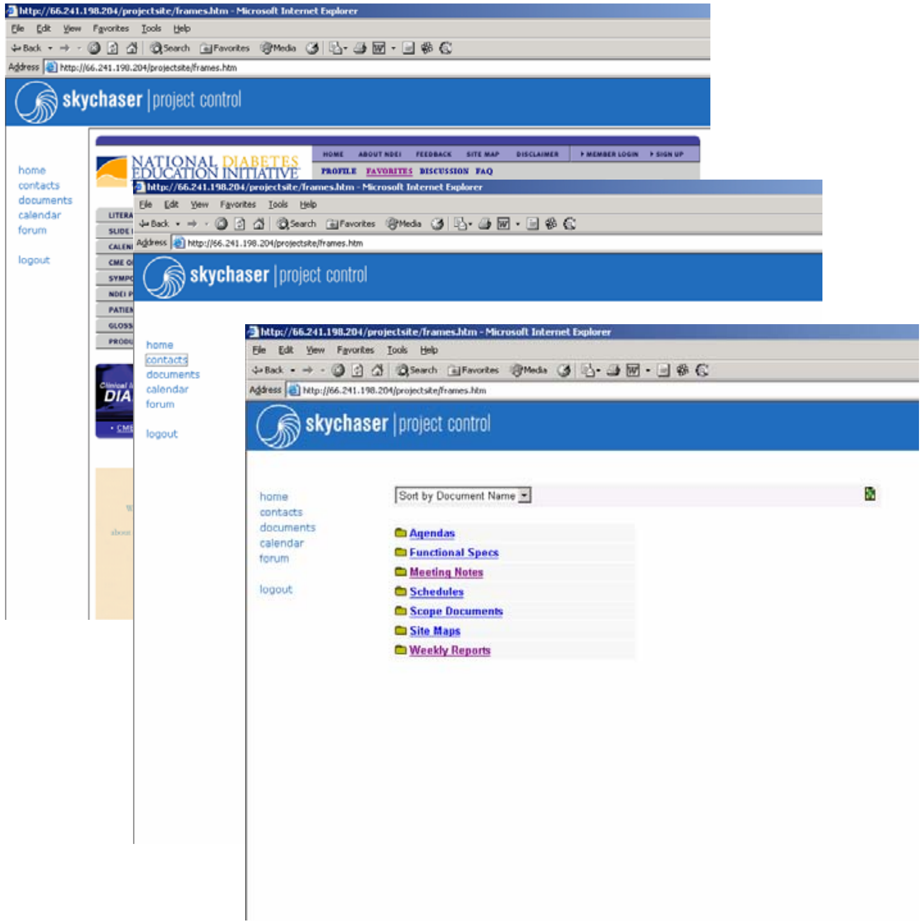
- ✓ Requirements are created once and then set in stone
- ✓ Architecture is created once and then set in stone
- ✓ Development is done in Isolation

Develop - Keeping Track of it all

- ✓ Show and Tell instead of Reports
- ✓ MBWA
- ✓ Email, Email, Email
- ✓ AIM/MSN/ICQ

- ✓ The Quintessential Project Site

Develop - The Quintessential Project Site


http://66.241.198.204/projectsite/frames.htm - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://66.241.198.204/projectsite/frames.htm
skychaser | project control
home
contacts
documents
calendar
forum
logout
NATIONAL DIABETES EDUCATION INITIATIVE
HOME ABOUT NDEI FEEDBACK SITE MAP DISCLAIMER MEMBER LOGIN SIGN UP
PROFILE FAVORITES DISCUSSION FAQ
Sort by Document Name
Agendas
Functional Specs
Meeting Notes
Schedules
Scope Documents
Site Maps
Weekly Reports

Develop – Common Mistakes

- ✓Standards and Documentation
- ✓Code Focus vs. Product Focus
- ✓Hand Coding Syndrome
- ✓Pointless/Endless meetings
- ✓Post Production Testing
- ✓Build vs. Buy
- ✓No Community Involvement

Develop - Standards and Documentation

- ✓"It's just one query…we don't need the component for that"
- ✓"I use shorter variable names, they make my code look better"
- ✓"I'll comment this code later…"
- ✓"Sure, we got standards… lots of them"

Develop – Documentation “Recommendations”

- ✓ Write all documentation in Latin
  - Quidquid latine dictum sit, altum sonatur
- ✓ Only Document the obvious

```
<!--- Looping over query here --->
```

- ✓ Document less to save code
- ✓ Name variables after your favorite Monty Python characters

```
<cfset killerRabbit = structNew()>
```

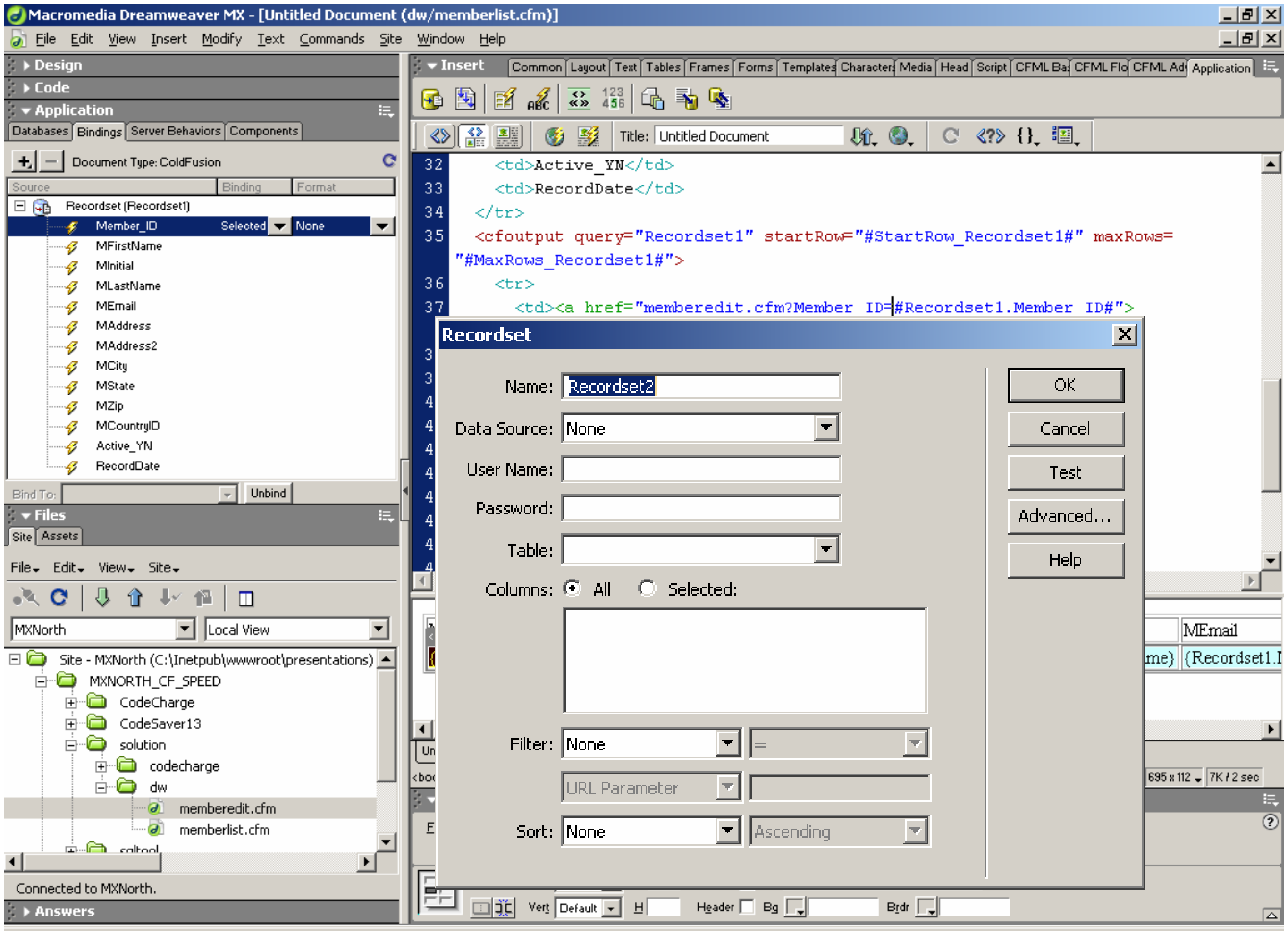
Code Focus vs. Product Focus

- ✓ The “milisecond” Trap
- ✓ Focus on the Final Result
- ✓ Scale Hardware – Not Software
- ✓ Consider Development Time when estimating cost

Develop - Hand Coding Syndrome

- ✓ Spend time doing real problem solving,
  - Do you really want to create a new Create/Read/Update/Delete template?
- ✓ You cannot code faster than your computer
- ✓ Get most of your project done in minimal time

Generating Code - Dreamweaver

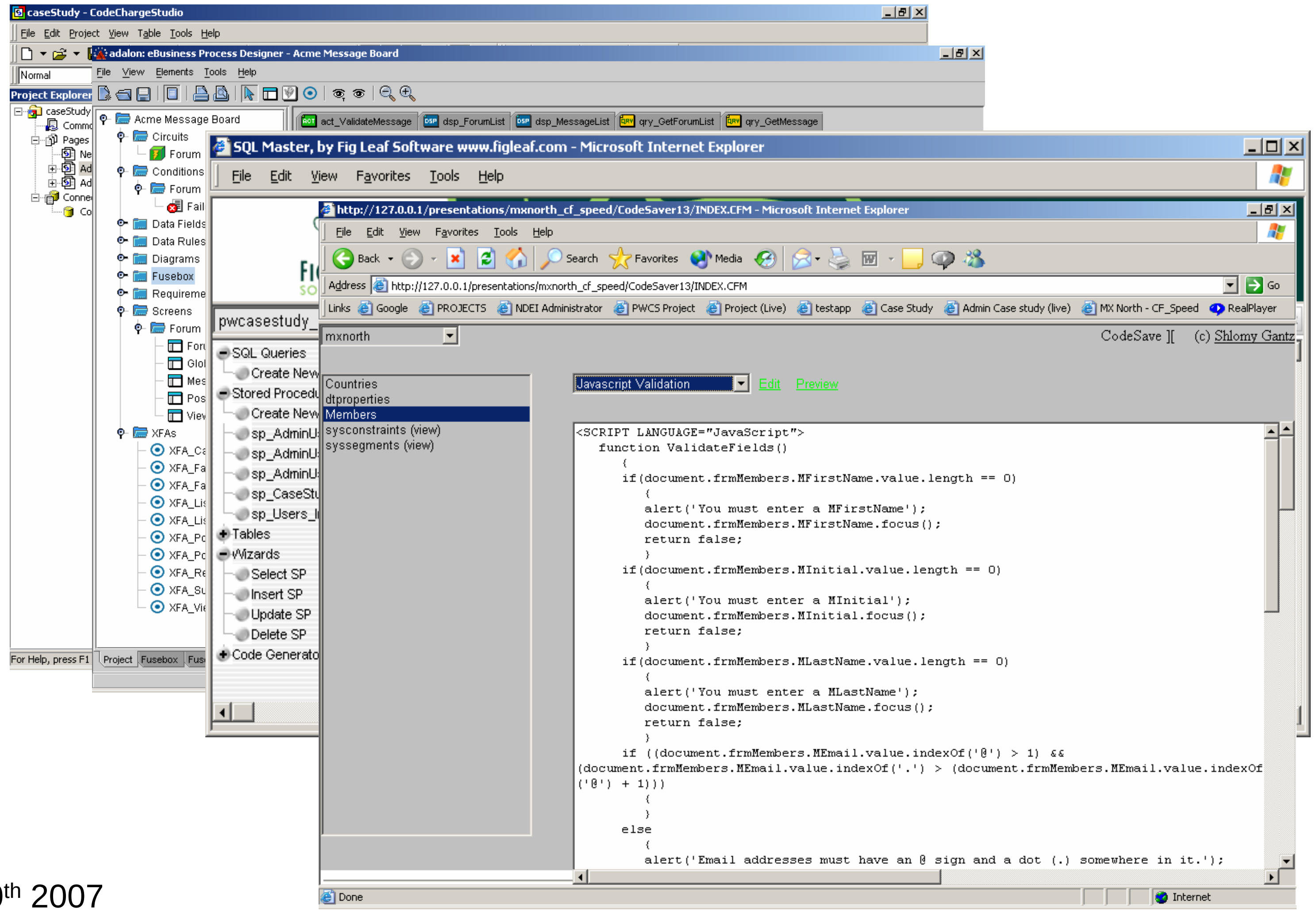


```
<td>Active_YN</td>
<td>RecordDate</td>
</tr>
<cfoutput query="Recordset1" startRow="#StartRow_Recordset1#" maxRows=
"#MaxRows_Recordset1#">
<tr>
  <td><a href="memberedit.cfm?Member_ID=#Recordset1.Member_ID#">
```

Recordset

Name:	Recordset2
Data Source:	None
User Name:	
Password:	
Table:	
Columns:	[✓ All] Selected:
Filter:	None =
	URL Parameter
Sort:	None Ascending

Generating Code – Other Tools


caseStudy - CodeChargeStudio
adalon: eBusiness Process Designer - Acme Message Board
SQL Master, by Fig Leaf Software www.figleaf.com - Microsoft Internet Explorer
http://127.0.0.1/presentations/mxnorth_cf_speed/CodeSaver13/INDEX.CFM - Microsoft Internet Explorer
mxnorth
CodeSave][(c) Shlomy Gantz
Countries
dtproperties
Members
sysconstraints (view)
syssegments (view)
Javascript Validation
Edit
Preview
pwcasestudy
SQL Queries
Stored Procedures
Tables
Wizards
Select SP
Insert SP
Update SP
Delete SP
Code Generator

```
<SCRIPT LANGUAGE="JavaScript">
   function ValidateFields()
      {
      if(document.frmMembers.MFirstName.value.length == 0)
         {
         alert('You must enter a MFirstName');
         document.frmMembers.MFirstName.focus();
         return false;
         }
      if(document.frmMembers.MInitial.value.length == 0)
         {
         alert('You must enter a MInitial');
         document.frmMembers.MInitial.focus();
         return false;
         }
      if(document.frmMembers.MLastName.value.length == 0)
         {
         alert('You must enter a MLastName');
         document.frmMembers.MLastName.focus();
         return false;
         }
      if ((document.frmMembers.MEmail.value.indexOf('@') > 1) &&
(document.frmMembers.MEmail.value.indexOf('.') > (document.frmMembers.MEmail.value.indexOf
('@') + 1)))
         {
         }
      else
         {
         alert('Email addresses must have an @ sign and a dot (.) somewhere in it.');
```

Develop – Endless/Pointless meeting

- ✓ Meetings should have
  - Written and Communicated Agenda
  - Start Time
  - End Time
  - Moderator
  - Written and Communicated Notes

  - Short !

Develop Buy vs. Build

- ✓ Do we really need another ColdFusion discussion forum?
- ✓ Do we really need another WYSIWYG editor?

- ✓ Do you really need to build it yourself?

Develop – Post Production Testing

- ✓ Don’t Wait Until The End Of The Development Cycle To Test
- ✓ Build And Test Often, Even Daily
- ✓ Use Build Tools To Automate
  - ant

Develop – Lacking Community Involvement

- ✓ Mailing lists
  - CF-talk
  - ChattyFig
  - Local user group
- ✓ Adobe Forums
- ✓ BLOGs
- ✓ CFDJ
- ✓ Books
- ✓ Conferences

Deployment and Maintenance

- ✓ Development Doesn’t End At Deployment
- ✓ Plan For Maintenance In Advance
- ✓ Create Support Structure And Documentation

In Summary…

Great Success !!!

Resources

Sites

- ✓ http://www.construx.com

  Steve McConnel
- ✓ http://www.shoottheprojectmanager.com

  Robert Brents
- ✓ http://www.extremeprogramming.org
- ✓ http://www.agilealliance.org

Books

- ✓ “The Accidental Project Manager”
  - Patricia Ensworth
- ✓ “Rapid Development”
  - Steve McConnel
- ✓ “Necessary, But Not Sufficient”
  - E. Goldart
- ✓ “The Software Development Edge”
  - Joe Marasco
- ✓ “The Mythical Man Month”
  - Frederick P. Brooks, Jr.

Q & A

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