Managing Cloud Software in the Real World
Highlights

- David Taber
- Charles Darwin
- Fred Brooks
- Steve Jobs
- You
Who is David Taber?

- 35 years in High Tech
  - Virtually all experience in software and systems
- Lecturer, UC Berkeley Haas Graduate Biz School
- CEO of a CRM Management Consultancy
  - Implemented 125+ Salesforce.com systems

Salesforce.com
Secrets of Success
Best Practices for Growth and Profitability

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No Really: Who is Dave Taber?

- **Undergraduate:** Cowell College
  - Medieval history and economics

- **Graduate:** Haas B-school @ Berkeley
  - Marketing and finance

- **Doing Technology:** all self-taught/OJT
  - Analog electronics — 1960’s and 70’s
  - Digital electronics — 1980’s
  - Software industry — 1990’s
  - Coding — 1980’s and 2000’s

- **Managing Technology:** vendors
  - Project management — SRI
  - Product Team management — Sun Micro
  - Consulting management — SRI and SalesLogistix
What’s this MOT Thing, Really?

Diagram:
- Economics
- User Preferences
- Business & Marketplace Issues
- Technology & Engineering
Haiku #1

It’s not the fittest
That survives, instead it’s the
Most adaptable
Some Stuff You Learned will Become Wrong

- Look at ancient history of what used to be taught to CS majors
  - CPU time is $150/hr
  - Disk access time averages 10 ms
  - Tape access time averages 10 seconds
  - "Nobody would ever need more than 640 k of RAM"

- Listen to what IBM forecasted
  - Total demand for computers is about 5 – 1952
  - The annual demand for PCs is about 10,000 – 1981
Cost Curves Since I Graduated

- Security Breaches
- Comm. $ / MB
- Hardware
- New SW
- Power & HVAC

Not uniform scale
So, Much of IT Was Optimized Wrong

- Developers would do anything to shave memory usage
  - Remember Y2K?
- Entire product categories were created to solve non-problems
  - Hierarchical storage managers, virtual disks, software accelerators…
- Financial types charged for the wrong things
  - Chargebacks and allocations are silent killers
  - Economics must not be the dismal science
- False optimization lead to crummy products and services
  - Learn from the way TI and GOOG price things
  - Volume really matters (it trumps every other advantage)
SFDC and AppExchange Features

Other Services
(Price Quotes, News Feeds, etc.)

Web Service API Calls
- Configuration
- Code
- Customer Data
Cloud Best Practices

- **Occasional big releases**
  - “Everyone gets it” – no laggards
  - Emergency patches every few days to some nodes

- **No big-bang feature releases**
  - Lower risk of over-investing & user fatigue

- **Really thorough system-level testing**
  - Use all your customers’ code as test cases
  - Use all your customers’ data as test vectors
  - Roll-backs means heads also roll

- **Multi-Tenant is Great for SaaS vendor**
  - Debatable for the SaaS user
Axioms Up-Ended by the Cloud

• “The smallest, tightest code is best”
• “Software must be built to last”
• “Proprietary beats standards”
• “Specialty beats commodity”
• “Time to Market is Everything”
• “The Best Technology Wins”
It’s Hard to Acknowledge Big Changes

• In your company’s own field, everyone will over-focus on the short term
  ➢ Competitive minutiae dominate today’s sales
  ➢ Bonuses shape behavior…then thinking…then values…

• But it won’t be so hard to see big shifts coming in related fields
  ➢ “Everybody knows the price of X will go to zero”

• Single most important book in this area: *The Innovator’s Dilemma*
Agile in the Real World...Haiku #2

Waterfall versus
Agile: still you must manage
Time, cost, and people
Code Mortality Rates

- **Getting better, but...**
  - $\frac{1}{2}$ the software you write will be thrown away

- **Most big software projects are failures**
  - Don’t achieve goals / are cancelled
  - Run over budget (~50%)
  - Are late

- **Most software products are barely profitable**
  - Amazing considering 90% gross margin...

- **Agile is the only practical medicine**
WE NEED THREE MORE PROGRAMMERS.

USE AGILE PROGRAMMING METHODS.

AGILE PROGRAMMING DOESN'T JUST MEAN DOING MORE WORK WITH FEWER PEOPLE.

FIND ME SOME WORDS THAT DON'T MEAN THAT AND ASK AGAIN.

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Are UCD and Iterative Dev Debatable?

- **Good news: the web changes everything**
  - Bye-bye Focus Groups
  - Hello Usability Labs
  - Hello Product Internal Click-Paths
  - Good riddance long product cycles
  - Hello Continuous Integration

- **UCD & Agile are still very controversial**
  - “Infrastructure and practices cost too much”
  - “Too risky – can’t tell where we are”
  - “Say what you want: it’s fixed price, fixed spec”
Making UCD & Agile Work

- **Constant, active management of expectations**
  - Users
  - Managers / budget holders
  - Best practice: “Boss demos” for every sprint

- **Recruit the CFO**
  - Forget about bean counters
  - Get to the person who thinks of cost functions
  - Persuade him/her that Agile = Cost Avoidance
    - Skip the things that don’t matter to the business
    - Lower cost of bugs
    - Improved business continuity
Making Agile Work

- Almost never “pure Agile”
  - Teams not trusted enough to really be self-determining
- Go light on “management tools”
  - Spreadsheets and simple timelines
  - Jira and “card walls”
- Be serious about dev infrastructure
  - Code repository
  - Collaborative dev
  - Continuous integration
  - Test code, vectors, and VM stacks
  - Wall of shame or Lava Lamps
The Four Mortal Enemies of Agile

• Distance
• Delay
• Dithering
• Doubt
The Hard Part: Agile Culture

- **Executives**
  - “Users be damned: I want my bright shiny object”
  - “Incrementalism is for wimps”
  - “I need a Big Bang—let’s just get ‘er done”
  - “You’re just trying to avoid accountability”

- **Users / Team Members**
  - Agile requires high IQ, high engagement
  - Agile means thinking outside the box about risk
  - Agile feels weird
Your Career: Haiku #3

Just a string of roles?  
Why not a bunch of mistakes  
With a great mission?
The Magic of Timing

- When to be in a company
- When to interview
Haiku #3.5

Where you choose to work
Can be more important than
What You’re working on
The Software World...

<table>
<thead>
<tr>
<th>Team Size</th>
<th>IT Dept</th>
<th>Integrator/consultant</th>
<th>ISV/SaaS app</th>
<th>ISV/SaaS Infr</th>
<th>Open Source</th>
<th>Independent</th>
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<tbody>
<tr>
<td>Typ. Code Base (kloc)</td>
<td>2-100 2-200 5-250 5-200 2-25</td>
<td>1-5</td>
<td>&lt;500</td>
<td>&lt;3000</td>
<td>&lt;10000</td>
<td>&lt;30000</td>
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<tr>
<td>Design Life (yrs)</td>
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<td>Cost Sensitivity</td>
<td>HM L L L H</td>
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<tr>
<td>Political Savvy</td>
<td>LM L M M-H H M-H M-H</td>
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<td></td>
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<tr>
<td>Average IQ</td>
<td></td>
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</tbody>
</table>
How I Stopped Worrying and Learned to Love Venture Capital
Understand Your Project’s Economics

Funding Approved

Development

Launch

First sale

Breakeven

Variable Costs

Breakeven

Per-Unit

Fixed Costs

All investments

Paid off –

Positive NPV

+$M

0

-$M

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The phrase “product launch” was invented during the space race.

VCs like quick hits, crash programs.

To fit, your business vehicle must need rocket fuel.

Nobody funds a bus.
It’s not enough just to be correct—you also must be persuasive
People are hard-wired to draw much more meaning from people than from the information that people present.
The Hard Facts

• If you’re lucky, *someone* in the audience will understand 80% of what you say
  ➢ At the time…

• If you’re lucky, they’ll remember 25% of *that* the next day

• So make sure that the 20% they remember (and act upon) is your most important message
  ➢ Ruthlessly prioritize – identify the ONE thing you want them to remember
  ➢ Hierarchy of points that *all* reinforce your message
  ➢ Repetition is required – same point three ways
“The key to effective communication: make it simple, concrete, and surprising.

Go through your PowerPoint deck and strike out every single abstraction.”

Chip Heath, Stanford Professor of Organizational Behavior
A Personal Anecdote

~13,500 words
~2.5 hours

~275 words
~2.5 minutes

November 19, 1863
Gettysburg, PA
Un-Learn Academic Style

- **Persuasion + Influence Trump Truth**
  - “Facts are boring things”
  - Assumptions, beliefs, and values are tough to shatter

- **Powerful Words. Short Sentences.**
  - Business people generally don’t read
  - Your audience may not be as well educated as you

- **The Mind is a Serial Device**
  - You must grab attention in the first 100 seconds
  - Who gave you permission to bore the audience?
The Power of Story Telling

Linear • • Creative
Structure • • Brainstorm
Analysis • • Impression
Sequence • • Excitement
Ranking • • Relationships
Units • • Clusters
Lines of Logic • • Arcs of Energy

Left Brain  Right Brain

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Uh-oh...

• “You have only 10 seconds to show you’re a Somebody.”

  – Leil Lowndes
Why Not Take In a Film...

Great “power actors”

Brando – Pacino – Gandolfini – Crowe – Hamm -- Spacey
Powerful People

- Carry themselves well
- Don’t physically do much or handle things
  - Avoid details, technicalities
- Do not move quickly or repetitively
  - Intent, but never hurried
- Exude control
  - Fewer words than subordinates
  - No explanations
- Are very effective time managers
  - Big picture
They may not remember what you say, but they'll definitely remember how you made them feel.

-- Tim Sanders, Yahoo
Impressions Matter

Nixon Wins 1960 Presidential Campaign Debate?

- 80% of newspaper readers
- 60% of the radio audience
- 40% of the TV audience
Know Thyself

- **Audiences respond favorably to:**
  - Height (BUT…)
  - Age
  - Looks
  - Grooming*
  - Dress*
  - Poise*
  - Vocal pitch*
  - Posture and elegance of movement*
  - Eye control*
  - Vocal power and pace*
  - Intelligence / Wit*
  - Rhetoric*
  - Beautiful diction*
  - English accent
  - Executive Presence*

- **Ask women for counsel on these**
Do at least one of these each year

- Acting class
- Singing
- Dance
- Exercise
- Martial arts or yoga
- Alexander technique
- Debating team
- Personal coach
- Record yourself speaking
- Video yourself
Visual Control

**Eyes**  
*Steady eye contact, not sweeping U/D/L/R*  
*Blink s-l-o-w-l-y!*

**Features**  
*Animated, yet relaxed*

**Head**  
*Jaw relaxed, neck centered; nod occasionally*

**Hands & Arms**  
*At sides, not body-wrapped; gesture; minimize repetitive movements*

**Stance**  
*Straight and balanced. Do not pace or shift!*

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# Vocal Control

<table>
<thead>
<tr>
<th>Volume</th>
<th>Dynamic, projecting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitch</td>
<td>Deep, resonant</td>
</tr>
<tr>
<td>Inflection</td>
<td>Expressive, pitch changes on key words</td>
</tr>
<tr>
<td>Tempo</td>
<td>Intent but not hurried</td>
</tr>
<tr>
<td>Pattern</td>
<td>Vary by topic – use silence</td>
</tr>
<tr>
<td>Unwords</td>
<td>Keep word count down!</td>
</tr>
</tbody>
</table>
Verbal Control

Before I begin ...
This is a busy slide ...
Sorry about this graphic ...
Ummm ...
Disregard this ...
I’m running out of time ...

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The right word may be effective, but no word was ever as effective as a rightly-timed pause.

- Mark Twain
Thank you for your time!

ceo@saleslogistix.com

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