Computer Science in Schlumberger

Leading Edge Software and Services for the Oil and Gas Industry

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Roots in Technology
Schlumberger Today

Total R&D Spending
$819 Million … Over $2 Million/Day

More than 70,000 People
140 Nationalities
Working in 80 countries

57 Research, Development & Manufacturing Centers

*Compared to 2005
Anh Kuhn de Chizelle
Software Métier Manager
SIS Houston Technology Center

November 3rd, 2009
Education & Background

• Education
  – BS in EE – Carnegie-Mellon University
  – MS in CS – UC Los Angeles
  – MBA – Rotterdam School of Management

• Background
  – Vietnamese French American
  – Schlumberger dual-career couple
Schlumberger Technical Communities

- 27 Technical Communities
  - 127 Special Interest Groups
  - 23,260 Members

- Information Technology & Software
  - 20 SIGs
  - 4,682 Members

  - 8,583 SIG Members – from other communities
A Borderless Career Path

1994
Engineering
Houston, TX

1997
Research
Cambridge, UK

1997
Research
Cambridge, UK

2000
Corporate KM
Paris, France

2000
Corporate KM
Paris, France

2004
Operations HQ
Moscow, Russia

2004
Operations HQ
Moscow, Russia

2007
Software Métier
Houston, TX

Another Exciting Challenge

2007
Software Métier
Houston, TX

2002
Operations HQ
Abu Dhabi, UAE

2002
Operations HQ
Abu Dhabi, UAE
1994 – 1997: Engineering, Houston

- Real-time 3D visualization
- GeoSteering software package
Geosteering: Drilling Geologically

Reservoir dip

Fault

GeoSteered

Geometric

Drilling down section

Fault

Drilling up section

Leveling off

Not exiting

Schlumberger
1997 – 2000: Research, Cambridge, UK

- First SLB virtual reality center
- 3D visualization for wellbore instability
- Research collaboration with BP
Virtual Reality and 3D Visualization

- Promotion of SLB Technical Communities
- Career Networking Profile
- Input to R&D
2002 – 2004: Real-Time Business Development Manager,
Abu Dhabi

- Real-time data delivery, monitoring and collaboration
- Business and technical
InterACT Data Flow – Telecommunication

Wireless Communication

Satellite, Inmarsat, VSAT, Phone

Cell Phone, Modem

encryption

Updated Interpretation

encryption

InterACT

Schlumberger
Wellsite Acquisition

Drilling & Measurements

Wireline Logging

Well Services

Well Testing

FracCAT

Partners
Contractors
Service Co.

Third Party

encryption

Schlumberger

Wellsite Acquisition

Drilling & Measurements

Wireline Logging

Well Services

Well Testing

Updated Interpretation

encryption

InterACT
InterACT Data Flow – Visualized Output

Wellsite Acquisition Systems

InterACT

Drilling Data

Logging Data

Stimulation Data

Well Testing Data

Visualization & Collaboration

Desktop, Pocket PC...

encryption

Schlumberger
2004 – 2007: Real-Time Manager, Moscow

- Well Construction and Production
- Remote connectivity
- Legal constraints
- R&D ↔ clients & operations
2007 – Present: Software Métier Manager, Houston

- Technology
- Process
- People
- Training
Product Lifecycle Management Process

- **Project Start**
  - Funded

- **Concept Closure**
  - Concept
  - Define product & options
  - Demo / prototype

- **Feasibility Closure**
  - Feasibility
  - Eliminate major risks
  - SW dev plan
  - Architecture

- **Development**
  - CMZ 1.0
  - SW iterative development
  - Tracking of scope, time, quality, cost

- **Beta**
  - Feedback from first client testers

- **Close-Out**
  - CMZ 1.1
  - CMZ 1.x

- **Project Closed**
Glen Accardo
Test Automation Lead
SIS Houston Technology Center

November 3rd, 2009
My Background

• Studied at University of Southwestern Louisiana
  • Computer Science, Mathematics, English

• Held the following positions before Schlumberger
  • Technical Writer
  • Web Master
  • Web Application Developer
  • QA for Database Performance Monitoring, Tuning, and Backup/Recovery
What Do I Do at Schlumberger?

- Tested Drilling and Production Applications
- Currently the Test Automation Lead
From the Program Mission

“The four-year undergraduate curriculum in computer science at Texas A&M provides a sound preparation in computing, as well as in science, mathematics, English, and statistics.”
Why is English in the List?

• Nearly all jobs require “Excellent communications skills.”
• Employers will probably see your writing before your programming—laziness or ineptitude in one will be applied to the other.
• Not just for Technical Writers.
• Not just for a job interview.
Do Programmers Use Writing Skills?

Linus Torvalds?

• As of 2006, he is credited with writing about 2% of the Linux kernel.

• However, he has built a community consisting of 1000’s of developers.

• This means that there are 1000’s of developers who understand the ideas.
Other Areas Where Writing Skills Apply

• Requirements Management
  • 29% of all software projects are cancelled, 22% are more than 100% late [Standish99]
  • Of these failed projects [Standish99]
    • 13% fail because of incomplete requirements
    • 10% fail because of unrealistic expectations
• Defect Tracking
Why Programming Languages?

- How many of you will take CSCE 314?
- What programming languages will you learn by the time you graduate?
What is the Value of Knowing More Languages?

- **Marketability**
- Better overall skills as a programmer
- Know more ways to solve a problem
- Know more ways to debug software
Questions?