Pragmatic Architecture

" Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object. "

Charles Sanders Peirce

Oliver Sturm
oliver@oliversturm.com

http://www.oliversturm.com

Oliver Sturm

thinktecture Associate

ineta

MVP Microsoft Most Valuable Professional

Copyright © 2011 Oliver Sturm

Oliver Sturm (@olivers)

- **Consultant and Trainer, Author**
- **Associate Consultant at thinktecture**

- **.NET Application System Architecture**
  - User Interfaces
  - Data Handling / Data Access Architectures
  - Programming Languages
  - DevExpress Component/Framework Products

- **Microsoft MVP for C#**
- **INETA Europe Speaker**

- **Services: http://www.oliversturm.com**
- **Blog: http://www.sturmnet.org/blog**

- **oliver@oliversturm.com**

Copyright © 2011 Oliver Sturm

Agenda

- Talk about Software Architecture
  - What is it?
  - How does it work?
  - Who's involved?
  - When does it happen?
- Creating an architectural concept
  - Using my sample scenario
  - Using *your* ideas
  - Considering and discussing individual decisions
  - Producing sample output to document the concept
- Interaction is important today!

Copyright © 2011 Oliver Sturm

Getting to know you - what do you do?

- Software Architect
- Developer
- Program Manager
- … ?

Copyright © 2011 Oliver Sturm

What are the roles in software creation?

- Software Architect?
- Developer?
- Program Manager?
- Customer?
- Tester?
- IT?
- Support?
- … ?

Copyright © 2011 Oliver Sturm

So what is Software Architecture?

- A design process
- Planning of the large components that make up the complete system
- An interactive process
- An ongoing process

Copyright © 2011 Oliver Sturm

Who architects software?

- Architects... duh. Who are they, then?
- Developers - are they involved?
- Customers - are they involved?
- Others?

Copyright © 2011 Oliver Sturm

How to make a decision

- It's obvious, isn't it...
- Specify the requirements
  - These are not always just technical!
- Consider the options
- For any external factors, talk to others
- Be aware of the implications. And that leads us to...

Copyright © 2011 Oliver Sturm

Pragmatism

Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.

Copyright © 2011 Oliver Sturm

Tools

- There's a broad spectrum of opinions, ranging from Notepad to CASE tools
- Index cards, whiteboard, written docs...
- Diagramming tools - Visio, OmniGraffle, Dia ...
- UML tools - Visual Studio, Enterprise Architect, ArgoUML, ...
- CASE tools - lots and lots - Rose, ERwin, Umbrello, ...
- Agile idea: use the tool that provides the best ROI
- And: KISS, as always.
  - Don't like KISS? Go with Leonardo da Vinci: "Simplicity is the ultimate sophistication"

Copyright © 2011 Oliver Sturm

Finally, what's the timeline?

- On the surface, it's Vision vs Agility
- Vision: Planning ahead can help find conceptional issues or bring up misunderstandings. Plus, it's fun! :-)
- In the face of change, it is often a bad thing to stick to plans and "tough it out"

- Agility is about continuously (re-)assessing the state of affairs, the signs of the time, the significance of plans and their details
  - It doesn't mean not to make plans in the first place!

Copyright © 2011 Oliver Sturm

An architecture concept - sample scenario

- Meet the client:

- Company produces and sells camping equipment: tents, sleeping bags, caravan awnings, etc ...
- Traditionally sells through retailers, wholesalers, a few outlets - simple business with known partners

Copyright © 2011 Oliver Sturm

Camping Experts - existing system

- Current application based on VFP
- Covers entire operations:
  - Supply
  - Production
  - Sales
  - Personnel management
  - Accounting, Payroll, etc

Copyright © 2011 Oliver Sturm

Camping Experts - new requirements

- World is changing
  - They want an internet online shop
  - They have lots more resellers, and they don't know them well
  - Data gathered from sales processes is growing and analysis is getting harder
  - Owners are getting older, tele-commuting would be nice, but was previously prohibited by the nature of the old computer system

Copyright © 2011 Oliver Sturm

Camping Experts - new requirements

- New application system is to be created, to supersede the entire VFP system gradually
- “Sales” is the block that shall be covered first
- “Future-proof” is a requirement
  - In the long term, chosen platform should stay around at least as long as VPF has
  - In the nearer future, functional blocks are to be added

Copyright © 2011 Oliver Sturm

Camping Experts - new requirements

- Required functional blocks for “Sales”
  - Inventory management
  - Inventory fed with values from production control in old VFP system
  - Online shop
  - For Partners and Outlet managers:
    - specific configuration of sales conditions
    - access to put in orders, handle returns, lodge complaints
    - provide access to sales reports, discount levels etc
  - Back Office
    - sales data analysis and reporting
    - partner performance evaluations, also automated
    - interface back from inventory management to production control

Copyright © 2011 Oliver Sturm

Demo

Architecture Concept for Camping Experts

Copyright © 2011 Oliver Sturm

Thank you

Please feel free to contact me about the content anytime.

oliver@oliversturm.com

Copyright © 2011 Oliver Sturm