

# 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*

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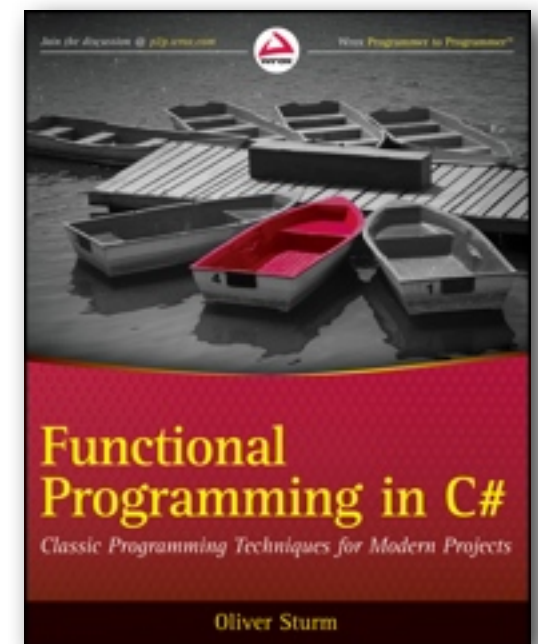
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# Agenda

- 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!

# Getting to know you - what do you do?

- Software Architect
- Developer
- Program Manager
- ... ?

# What are the roles in software creation?

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

# 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

# Who architects software?

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

# 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...



# 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.

# 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"

# 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!

# 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

# Camping Experts - existing system

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



# 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



# 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



# 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
  - Mehrere Standorte, Sprachen
  - Stammdaten-Zugriff von alt und neu
  - Maximale Antwortzeit: 3s, bis 20000 Onlineshop-Nutzer pro Tag
  - Verfuegbarkeit: 99.999%
  - Wartbarkeit Source Code
  - Datenvolumen: 800 Produkte, Millionen Transaktionen/Jahr
  - Security / Nutzerverwaltung







## Architecture Concept for Camping Experts

# Thank you

Please feel free to contact me about the content anytime.

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