

A spiral-bound notebook with a light brown, textured cover and a dark brown border. The spiral binding is on the left side. The title is centered on the cover in a brown serif font.

Patterns of System Administration

“Wait, How Did I Get Here?”

- ✓ Geoff Helprin (SAGE-AU) is finishing the next SAGE Short Topics booklet on “Auditing Systems Administration”
 - by “auditing” they mean “classifying”
- ✓ Geoff developed 14 category taxonomy of what we sysadmin types actually do

...and there was much rejoicing.

Well, wait...

- ✓ Once we know what we do, how do we know when it's done right?
- ✓ Especially when there are multiple right ways to do things?
- ✓ Even more especially, when the "right" way changes depending on the type, size, etc of the site?



This Where Patterns Come In!

What Are Patterns?

- ✓ One definition is “a proven solution which is able to serve as a template, presented in a meaningful context”.
- ✓ Other definitions get even more mystical.

Where Did This Come From?

- ✓ Original concept comes from Christopher Alexander & his Berkeley architecture folks
- ✓ Described real architecture, ie buildings
- ✓ Wrote a series of books
 - A Pattern Language
 - The Timeless Way of Building
 - The Oregon Experiment

Okay, Give an Example

✓ “Windows on Two Sides”

- People like rooms with a lot of light, and light gives them temporal and geographical cues that make them more comfortable. When possible, structure interior layouts so that rooms can have windows on two sides.

Another Example

✓ “City - Country Fingers”

- Do your zoning to include long “fingers” of rural or agricultural land separating urban or suburban zones, so that more people get the benefit of being near open land, farmers have a more direct market path to customers, fewer transport issues, etc.

Buzzword Horizon Alert!

- ✓ This pattern stuff has been catching hold in the software community since the early 90's
- ✓ The SmallTalk folks started trying to describe good SmallTalk programming
- ✓ Data typers & general programmers joined the bandwagon
- ✓ CORBA, object-oriented folks next-- fear!

Why “fear”?

- ✓ Essence of patterns is understandability and applicability
- ✓ Many of these books seem to be 1 or 2 layers of abstraction away from the “pattern” level
 - too big & squishy: “Keeping food in containers of various types can lengthen its life.”
 - too detailed: “Putting cheese in an army surplus ammo box will keep away it from mice.”

So What Makes a Good Pattern?

- ✓ Well, that's harder
- ✓ Many discussions going on in various forums
- ✓ You will probably know it when you see it
- ✓ ...but someone will disagree with you. ;-)

A Good Pattern:

- ✓ is based on a specific problem
- ✓ provides a specific solution
- ✓ with multiple implementations
- ✓ at a clearly defined scale (micro to macro)
- ✓ interlocks with other patterns that help define scope
- ✓ documents a “best practice”

Various Resources for Patterns

- ✓ the Wiki web: discussion groups on patterns in software development
- ✓ Portland Pattern project
- ✓ SmallTalk pattern project

SysAdmin Patterns

- ✓ We're forming a mailing list
- ✓ Planning to work from Geoff's Taxonomy
 - define best practices within the categories and instances