Object Technology '99

Mining for Patterns

Workshop WS8 Tuesday 0900-1200

Mary Lynn Manns
University of North Carolina at Asheville
USA
manns@bulldog.unca.edu

The use of patterns for capturing and documenting knowledge is growing. However, it is still difficult for those who wish to build a pattern repository in their organization to stimulate interest and acquire support from others in the organization. This is important because the development of patterns and pattern languages is time-consuming. One must sift through large amounts of information to acquire knowledge from "experts" and other sources, assimilate it into patterns, and then iterate through reviewing and refining it. These tasks are known as *pattern mining*. This workshop will address the many challenges in transitioning to and mining for patterns, with the goal of uncovering techniques for meeting these challenges and, in turn, writing more practical and usable patterns.

Topics

- > transitioning to patterns; gaining organizational support
- > mining the patterns
- building the repository
- > encouraging widespread use of patterns throughout the organization

Benefits

Patterns are not grown or created. They are present in the artifacts that already exist (DeLano 1998). However, finding the patterns in these "artifacts" can be tedious and challenging and therefore, will require a large amount of organizational support. The objective of this workshop is to

continue the work begun at the OOPSLA'98 pattern mining BoF session. Individual experiences with patterns (even bad experiences!) will be shared. Attendees will learn from one another and work towards developing effective techniques that can help make the process of pattern mining fruitful and even fun!

Level

Basic and Intermediate; anyone who has worked with patterns and/or developed patterns in any way on any level

Format ¹

- ➤ Introduce workshop; form groups
- ➤ Reflect on the *challenges* in mining for patterns; discuss, collate, and rank these challenges
- Discuss and document ways to meet the challenges
- ➤ Record the challenges and the techniques for meeting the challenges into first drafts of potential patterns

¹ This is an adaptation of the format used in John Daniel's *Agents of Change* workshop at OT'98. Thanks, John, for encouraging me to use it again.

Challenges

The challenges in transitioning to and mining for patterns in an organization will be explored. The list below contains challenges uncovered at previous workshops and through interviews and surveys. Please tick your opinion about the influence of each one. In the space provided, add any challenges that are not shown on this list. (Leave the last column empty for now.)

	very	rather	not	
	influential	influential	influential	rank
convincing management to				
support pattern efforts				
finding leader(s) for the effort				
educating people about patterns				
generating excitement for patterns				
keeping the interest in patterns				
alive and well				
resistance to change				
abuse of the word pattern				
("everything" is a pattern)				
finding effective techniques				
to capture the knowledge				
finding "domain experts"				
encouraging people to reflect on				
what they do				
developing an effective pattern				
format				
writing the patterns				
reviewing & validating the patterns				
creating the pattern language				
storing the patterns (repository)				

Meeting the Challenges

Techniques for meeting the challenges expressed in the previous section will be explored. In the table below, record techniques used by you or your organization for easing or eliminating any challenges encountered. Add other challenges you feel are influential. Use the last column to record how successful you feel your technique is, on a scale of 1 to 4, as follows:

1 2 3 4 very successful

Challenge	Technique for meeting the challenge	success (1 – 4)
convincing management to	-	
support pattern efforts		
finding leader(s) for the effort		
educating people about patterns		
generating excitement for patterns		
keeping the interest in patterns		
alive and well		
resistance to change		
abuse of the word pattern		
("everything" is a pattern)		
finding effective techniques		
to capture the knowledge		
finding "domain experts"		
encouraging people to reflect on		
what they do		
developing an effective pattern		
format		
writing the patterns		
reviewing & validating the		
patterns		
creating the pattern language		
storing the patterns (repository)		

A Challenge and the Solution

In this section, we begin <u>drafting</u> some *pattern mining* patterns. Even though these will be first drafts, everyone is encouraged to contribute his or her idea to a <u>work-in-progress</u> web page about "mining for patterns". (This web page will be created after this workshop.)

Your name	Your email
Challenge Describe the challenge.	
Influences List the things that were occurring wh	aich made the challenge a challenge
a.	nen made the chancinge a chancinge.
b.	
c. d.	
u.	(continued on the next page)

Technique Describe the technique you or your organization used to ease or eliminate the challenge.
Consequences What happened when this technique was used? Describe the aftermath of using the technique.
Issues to Consider Are there any trade-offs, constraints, and/or potential pitfalls in using the technique? (<i>There usually are.</i>) If so, describe these.
Name State one or more handy name(s) for this potential pattern.

Another Challenge and the Solution

Don't stop with just one idea!

Your name	Your email
Challenge Describe the challenge.	
Influences List the things that were occu	rring which made the challenge a challenge.
a.	
b.	
c.	
d.	
	(continued on the next page

Technique Describe the technique you or your organization used to ease or eliminate the challenge.
Consequences What happened when this technique was used? Describe the aftermath of using the technique.
Issues to Consider Are there any trade-offs, constraints, and/or potential pitfalls in using the technique? (<i>There usually are.</i>) If so, describe these.
Name State one or more handy name(s) for this potential pattern.