Background Material on Design Pattern structures

Christopher Alexander's Original Pattern Structure	
Name	A short familiar, descriptive name or phrase, usually more indicative of the solution than of the problem or context. Examples include Alcoves, Main entrance, Public outdoor room, Parallel roads, Density rings, Office connections, Sequence of sitting spaces, and Interior windows.
Example	One or more pictures, diagrams, and/or descriptions that illustrate prototypical application.
Context	Delineation of situations under which the pattern applies. Often includes background, discussions of why this pattern exists, and evidence for generality.
Problem	A description of the relevant forces and constraints, and how they interact. In many cases, entries focus almost entirely on problem constraints that a reader has probably never thought about. Design and construction issues sometimes themselves form parts of the constraints.
Solution	Static relationships and dynamic rules (microprocess) describing how to construct artifacts in accord with the pattern, often listing several variants and/or ways to adjust to circumstances. Solutions reference and relate other higher- and lower-level patterns.

Danny Mittleman's textbook's protocol	
Name	Name of the pattern solution; there is also a coding scheme.
Picture	A sample implementation of the solution.
Background	The context for the pattern, describing other patterns that lead to this pattern and how they are related. Scope of the pattern described.
Problem	A concise statement of the specific problem the pattern addresses.
Forces	Part of the problem statement describing situations in more detail examining how stakeholders, tasks, technology, and external context affect the problem and solution.
Solution	Succinct statement of how to solve the problem. Usually a sketch helps to visualize the solution.
Other Patterns to Consider	Additional patterns that may be informative or alternatives.

Structure of a Design Pattern
Danny's more complete version

Term	Description
Pattern Name	Describes the essence of the pattern in a short, but expressive, name
Intent	Describes what the pattern does
Also Known As	List any synonyms for the pattern
Motivation	Provides an example of a problem and how the pattern solves that problem
Applicability	Lists the situations where the pattern is applicable
Structure	Set of diagrams of the classes and objects that depict the pattern
Participants	Describes the classes and objects that participate in the design pattern and their responsibilities
Collaborations	Describes how the participants collaborate to carry out their responsibilities
Consequences	Describes the forces that exist with the pattern and the benefits, trade-offs, and the variable that is isolated by the pattern

ThinkLets	Alexander	Systems Engineering	Web Engineering	Danny's Pattern Parameters
Compared pattern structures				
Name	Name	Pattern Name	Name	Name
		Also Known As		• Synonyms
		Intent	Forces	Purpose or Intent of Pattern
When to use	Context	Motivation	Background	•Context when to use •
When Not to use	Problem	Applicability	Problem	•Context of when not to use
Inputs				Data Structures •Input data structures
Outputs				•Output data structures
Setup	Solution	Structure	Solution	Steps •Pre-session setup requirements
Steps: say this; do this				•Activity steps (say this/do this) and decisions rules
Insights		Consequences		Insights about use/FAQ
		Participants		Stakeholders or classes of user roles
		Collaborations	Other Patterns to Consider	Other Patterns/ThinkLets to consider
Success Stories	Example		Picture	Examples of use

A Web Engineering Approach To Patterns	
Name	Name of the pattern solution; there is also a coding scheme.
Picture	A sample implementation of the solution.
Background	The context for the pattern, describing other patterns that lead to this pattern and how they are related. Scope of the pattern described.

Problem	A concise statement of the specific problem the pattern addresses.

Forces	Part of the problem statement describing situations in more detail examining how stakeholders, tasks, technology, and external context affect the problem and solution.
Solution	Succinct statement of how to solve the problem. Usually a sketch helps to visualize the solution.
Other Patterns to Consider	Additional patterns that may be informative or alternatives.

IAF Methods Database	
(Jon Jenkins)	
Common name	This is the most common name of the method.
Alternative names	Some times a method will have more than one name such as The Focused Conversation Method is also known as the Basic Conversation Method, ORID, and the Art Form Method.
Intent or Purpose	The outcome of the method. I put the Rational Objective here and follow it with the Existential Aim
Level of Process	Check the appropriate level of the process. For example a strategic planning process would have the Application box checked, a session opening would have methods and models checked and dealing with a difficult person would have Intervention checked.
Application (see Application Focus)	These are complete process such as strategic planning
Method and Model (see Method and Model Focus)	These have products but generally do not produce a end product. Examples of this are brainstorming or ice breakers such as the expert game.
Intervention (see Intervention Focus)	These are activities the facilitator does based on the need of the session. For example, when a person becomes difficult the facilitator will intervene but it is not part of the plan of the session.
Application Focus	One or more of the items under this field are checked.
Action planning	This produces a plan including, steps or action, time, and who is responsible.
Basic meeting facilitation	This is the process of leading a regular meeting
Basic Workshop Method	This has a context, idea generating, clustering or prioritizing, naming and a conclusion
Team and Community Building	These are team or community building activities such as workdays.
Conflict resolution	Techniques that resolve a conflict
Model Building	These techniques result in a model such as the social processes or a course design
Organizational development	These techniques are used in improving the performance of an organization
Product development	These techniques result in new products.
Process development	These result in new processes for an organization
Problem solving	These are problem analysis and solving techniques.
Process improvement	These take existing organizational processes and improve them
Project planning	These are the various project planning techniques
Strategic planning	These result in a strategic plan.
System design	These will end up with the design of a system such as the design of a new software application.
Environmental Analysis	These analyze the environment in which an organization is

	operating
Method or Model Focus	Check one or more of the following if it is a method or model.
Openings	Methods for starting meetings.
Ice Breakers and Energizers	These are ice breakers and energizers
Sharing Information	These are techniques for groups to share information
Analysis	These are analytical processes
Idea Generating	These are idea generating or creativity techniques
Reflection / Dialogue	These help groups to reflect on a situation.
Combining Ideas	These are types of clustering ideas.
Selection / Prioritising Processes	These enable a group to select or prioritize a list of ideas.
Assignments	These are ways of making assignments to actions or areas of responsibility.
Evaluation of Work	These help a group analyze their work such a project
Consensus	These are techniqus for reaching a consensus such as Sam Kaner's decision ruler.
Closings	These are methods for closing meetings.
Intervention Focus	Check one or more of these if it is a intervention
Difficult People and/or Situations	These are techniques for dealing with difficult situations or people
Directing Traffic	These are used when more than one person wants to talk at the same time.
Creativity	These are activities that product creative ideas.
Disagreements	These are ways of dealing with disagreements
Conflicts	These are ways of dealing with conflicts that go beyond disagreements
Contexts	These are ways of setting the context for a session.
Process Interventions	These are techniques for intervening in groups processes
Avoidance of Making Decisions	These deal with groups who are refusing to make a decision either consciously or unconsciously.
Deciding too Quickly	These are ways of dealing with groups who are making decisions too quickly or without looking into the consequences.
Undiscussable Topics	These are techniques for raising issues that no one wants to talk about.
Running in a Rut	These are techniques for dealing with groups who go over the same ideas or arguments over and over.
Little Group Participation	These are ways of increasing group participation when it is low
Silent Participant	These are methods for dealing with people who seem to be not participating.
Used as component of	Some methods are normally used in specific processes and these processes are mentioned here (this box is not used

	much).
Recognizable Components	These components of the technique that are recognizable as part of other methods.
Types of Participants	What kinds of participants normally participate in this kind of workshop. (this box is not used much)
Recommended Size of Group	This is the optimal size of the group. If you don't know put 12 – 25
Optimal Amount of Time needed	This the amount of time to do the technique in a normal groups the size mentioned above. If you don't know say 30 to 90 minutes
Level of Participation	Normally this is high.
Usual or Expected Outcomes	These are the results of the workshop in concrete terms.
Ideal Conditions	This are the best circumstances. (this box is not used much)
Potential Pitfalls	Potential problems or things that can go wrong are put in this box. (This box is not used much)
How is success evaluated	This is the criteria for evaluating the success or failure of the session. (This box is not used much)
Examples of successes and failures	These are life examples and should be left blank if you don't have any.
Level of Difficulty to Facilitate	Check one of the boxes below.
No specific skills required	Any one who can works with a group should be able to do this method.
Facilitation skills required	Some skills are needed to facilitate this technique.
Specialized skills required	These techniques need specialist information if they are to be facilitated effectively.
Type of Facilitator-Client Relationship	(This box is not used much) but when it is it describes any special relationships that are needed for this technique to work well.
Facilitator Personality Fit	Not all facilitators fit well with some kinds of workshops. What kind of personality does the facilitator need?
Setting and Materials	What is the normal room, table and chair setting for this session? This would include things like white boards or overhead projectors
Resources Needed	These are things like forms, special equipment,etc.
Pre-Work Required	What needs to be done beyond the normal preparation. This might include things like preparing charts or worksheets.
Procedures	These are the step by step procedures for the technique. This should include for example the opening and closing and any reflections
Follow-Up Required	Are there follow up sessions or activities that are necessary?
How flexible is the	Can the process be used in a variety of settings, topics and

process?	facilitators?
Developer	Who developed this technique
Derived from	If it was gotten from somewhere else or is a modification of another method this should be stated here
History of Development	How the methods was created and how it developed over time.
Epistemological Framework	What is the philosophic assumptions behind the technique. (This box is not used much)
ISBN numbers	If the method is found in a book or referred to in a book put the ISBN number here
References	This should be a standard APA citation.
License Model	Check one of the below.
Closed	These methods are legal property and only the owners can use them.
Licensed	These techniques are licenses for other to use them.
Open	These techniques can be used by anyone but the user should mention the source of the method while using it.
Free (or unattributable)	These techniques are use widely and the developer is not known or is not concerned about recognition
Website	These is a website where the method is found or or discussed. If there is none then use the IAFMD website