

DESIGN PATTERNS IN FREE SOFTWARE AND PERMACULTURE

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PERMACULTURE

Permaculture is an approach to the design of human settlements and agricultural systems that mimic the relationships found in natural ecologies. It aims to create stable, productive systems that provide for human needs, harmoniously integrating the land with its inhabitants.

Permaculture is sustainable land use design based on ecological and biological principles, often using patterns that occur in nature to maximise effect and minimise work.

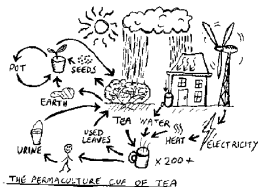
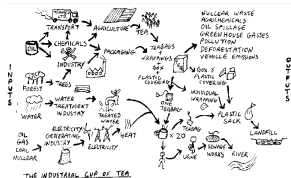
Permaculture is an attempt to work smarter, not harder:

- Traditional pre-industrial agriculture was labor intensive
- industrial agriculture is fossil fuel intensive
- permaculture is design and information intensive (and petrofree)

Elements in a system are viewed in relationship to other elements, where the outputs of one element become the inputs of another.

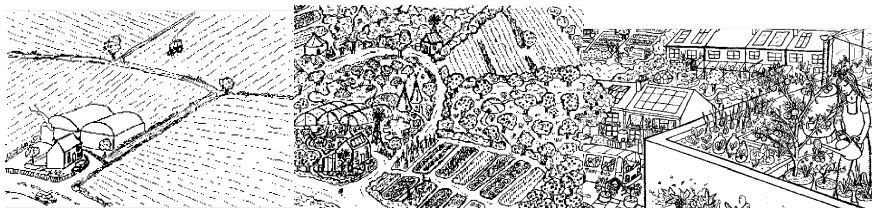
OVERVIEW

- System



VS

- Pattern



POINTS OF INTEREST

Permaculture, as Free Software, is:

- Interoperable
- Agile
- Passionate
- Sustainable
- Resilient

INTEROPERABLE

Perceives the elements of an ecotope in relationship to others, where the outputs of one element become the inputs of another.

AGILE

Design and information intensive, shifting away from the axis of labor / resource intensity.

PASSIONATE

Form of architecture patterns as well as an informal institution of alternative social ideals growing through a network of publications, permaculture gardens/software, training programs, and internet forums.

SUSTAINABLE

Aiming at the realization of systems that can be sustained indefinitely, virtue is time-based.

RESILIENT

Each element of a design is carefully analyzed in terms of its needs, outputs, and properties; inhabitants' needs are provided for using open and peer reviewed technologies. Resilience is a quality emerging after an initial more intensive investment of knowledge and labour.

PERMACULTURE SYSTEM DESIGN

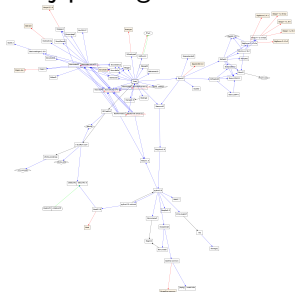
Modern permaculture is a system design tool.

It is a way of:

- looking at a whole system;
- observing how the parts relate;
- planning to mend sick systems by applying ideas learned from long-term sustainable working systems;
- seeing connections between key parts;
- seeing solutions, not problems.

SOFTWARE DEPENDENCIES

- freej package



LIFE DEPENDENCIES

- Plant guilds



OBREDIM

An acronym for

- Observation
- Boundaries
- Resources
- Evaluation
- Design
- Implementation
- Maintenance

OBSERVATION

Allows you first to see how the site functions within itself, to gain an understanding of its initial relationships.

Some recommend a year-long observation of a site before anything is planted. During this period all factors, such as lay of the land, natural flora and so forth, can be brought into the design. A year allows the site to be observed through all seasons, although it must be realized that, particularly in temperate climates, there can be substantial variations between years.

BOUNDARIES

Boundaries refer to physical ones as well as well to those neighbors might place, for example.

RESOURCES

Include the people involved, funding, as well as what can be grown or produced in the future.

EVALUATION

Of the first three will then allow one to prepare for the next three.
This is a careful phase of taking stock of what is at hand to work with.

DESIGN

Is a creative and intensive process, and must stretch the ability to see possible future synergetic relationships.

IMPLEMENTATION

Is literally the ground-breaking part of the process when digging and shaping of the site occurs.

MAINTENANCE

Is then required to keep the site at a healthy optimum, making minor adjustments as necessary. Good design will preclude the need for any major adjustment.

PERMACULTURE PRINCIPLES

These restatements of the principles of permaculture appear in Holmgren's book "Permaculture: Principles and Pathways Beyond Sustainability"

OBSERVE AND INTERACT

By taking time to engage with nature we can design solutions that suit our particular situation.

CATCH AND STORE ENERGY

By developing systems that collect resources at peak abundance, we can use them in times of need.

OBTAIN A YIELD

Ensure that you are getting truly useful rewards as part of the work that you are doing.

APPLY SELF-REGULATION AND ACCEPT FEEDBACK

We need to discourage inappropriate activity to ensure that systems can continue to function well.

USE AND VALUE RENEWABLE RESOURCES AND SERVICES

Make the best use of nature's abundance to reduce our consumptive behaviour and dependence on non-renewable resources.

PRODUCE NO WASTE

By valuing and making use of all the resources that are available to us, nothing goes to waste.

DESIGN FROM PATTERNS TO DETAILS

By stepping back, we can observe patterns in nature and society. These can form the backbone of our designs, with the details filled in as we go.

INTEGRATE RATHER THAN SEGREGATE

By putting the right things in the right place, relationships develop between those things and they work together to support each other.

USE SMALL AND SLOW SOLUTIONS

Small and slow systems are easier to maintain than big ones, making better use of local resources and producing more sustainable outcomes.

USE AND VALUE DIVERSITY

Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.

USE EDGES AND VALUE THE MARGINAL

The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.

CREATIVELY USE AND RESPOND TO CHANGE

We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.

7 LAYERS

A funny exercise

N	Function	Permaculture	Software	Function	N
7	Plant crowns	The canopy	Application	Process to process comm.	7
6	Fruits	Low trees	Presentation	Data en/coding	6
5	Climbers, vines	Vertical layer	Session	Interhost communication	5
4	Foliage cover	Shrubs, Bushes	Transport	Reliability and flow ctrl	4
3	Stems, pioneers	Herbaceous	Network	Path determination	3
2	Fertility, erosion	Soil surface	Data Link	Physical addressing	2
1	Roots	Rhizo/Mycosphere	Physical	Media, signal transmission	1

Stretch your mind with Synchretism, it's fun! :D

SALAAM/SHALOM/SHANTHI/DOROOD/FRED/PEACE



A thousand flowers will blossom!

- Permaculture urban laboratory <http://urbaniahoeve.nl>
- More musings on <http://jaromil.dyne.org/journal>
- Can haz **flattr**, search 'jaromil' there, 10x !!
- Check out our next project! <http://dyndy.net>

Jaromil, dyne.org developer, jaromil@dyne.org

dyne:bolic GNU/Linux 100% Free Live OS

Netherlands Media Art Institute, R&D

PhD candidate, Planetary Collegium, Plymouth Univ.

"Generative Patterns for Alternative Economies"

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