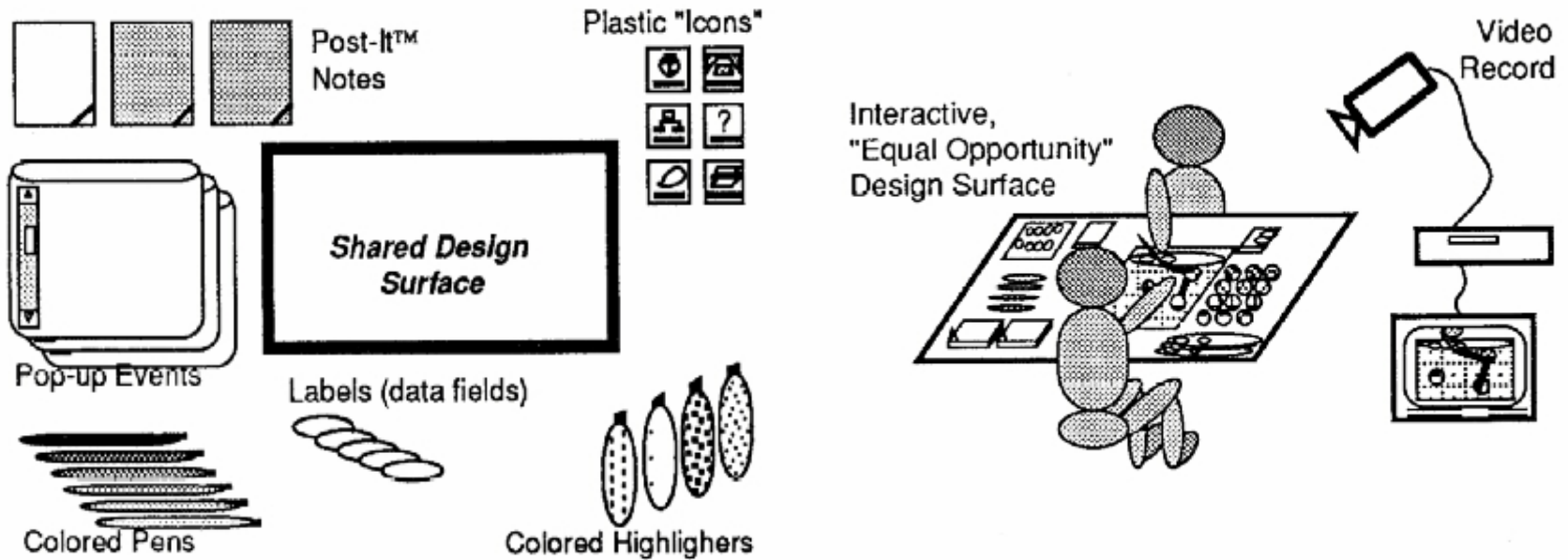# PICTIVE

"Plastic Interface for Collaborative Technology Initiatives through Video Exploration"

Introduction to PICTIVE (1/3)

- Increase the direct participation of stakeholders in the design of software
  - The members are co-designers
- Non-software based rapid prototyping environment of common office objects
  - Video recording technique

Introduction to PICTIVE (2/3)

Introduction to PICTIVE (3/3)

- Enables a non-technical persons to contribute ideas to the development process.
- Prototype should give a user a sense of what a system will look like and how it will behave once it is finished.

Using PICTIVE (1/4)

- Identify and invite a diverse set of stakeholders
    - Users
    - Developers
- Every stakeholder is expert on the content of the job

Using PICTIVE (2/4)

- Participants should prepare materials beforehand
  - Users write up step-by-step scenarios of their most important work tasks
  - Designers prepare a short presentation on requirements and issues that they have identified
  - Developers prepare initial *system components* and material on the basics of the technical approach

Using PICTIVE (3/4)

- Begin session with homework presentations
  - Requirements help ground later discussion
  - Users' scenarios inform designers and implementers
  - Implementers' explanation of technical approach helps users to generate a model of what is possible
- Presentations provide *reciprocal education*

Using PICTIVE (4/4)

- Design team introduces several issues and asks for the group to represent ideas for resolving them

- Session proceeds as a group brainstorming session

- Videotape session for later analysis

Suitable projects for PICTIVE

- Technology is ready to be applied to a practical problem
- Users are available who understand what they need from technology

Summary

- The goal of a PICTIVE is to simplify the design process enough that non-technical users are empowered to participate in it
- The major difference between rapid prototyping and PICTIVE is the fact that PICTIVE does not use computer technology that can be confusing to the non-technical participant

References

- Muller, 1991, *PICTIVE—an exploration in participatory design*
- Muller, 1992, *Retrospective on a year of participatory design using the PICTIVE technique*
- Muller, 1993, *"Equal opportunity" PD using PICTIVE*
- Schuler D., Namioka A., 1993, *Participatory Design: Principles and Practices*

CARD

(Collaborative Analysis of Requirements & Design)

- Discovered by Tudor in (1992)
- High level of abstraction:
  - typically models screen flows **not** detailed screen design
  - states only the type of information on a screen
- Use cards or post-it notes with links to map out system designs

Participatory Design

- Users are 1st class members in the design process
  - Active collaborators vs. passive participants
  - Work together with engineers
- Users considered subject matter experts
  - Know all about the work context
- Iterative process
  - Artifacts: task flows, task objects, GUI objects
  - All design stages subject to revision

Major Categories of PD

- **CARD**
(Collaborative Analysis of Requirements & Design)

- **PICTIVE**
(Plastic Interface for Collaborative Technology Initiatives through Video Exploration)

PICTIVE
Brief Description

- Materials used:
  - Simple office items such as pens, paper, sticky notes, sticky tape, glue, scissors
  - Collection of pre-printed (plastic) design objects for screen and window layouts.
- Equipment used:
  - Shared design surface, e.g. table
  - Photocopier
  - Video recorder(s)

CARD
Brief Description

- Stakeholders all introduce themselves

- Brief discussion and agreement on **scope** of system to be modelled

- Brainstorm key ideas for design

- Produce design **collaboratively**

- Document key decisions made and rationale

Comparison

CARD

- CARD uses playing cards with pictures of specific items on them.

- CARD looks at the flow of the task, just as storyboarding

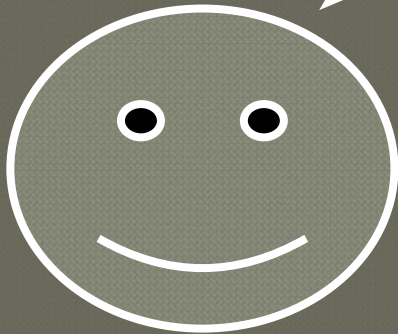- CARD giving a Macroscopic view of the task flow.

PICTIVE

- Prototyping method uses low-fidelity office products, such as pens, papers, and sticky notes. The actions of the users are videotaped.

- Concentrates on the detailed aspects of the system.

- PICTIVE giving the microscopic view.

Example

- Card uses playing cards with pictures of computers and screen dumps on them to explore work flow options.

- The example shows how the task of buying groceries through a computer screen such as via internet can be represented by playing cards.
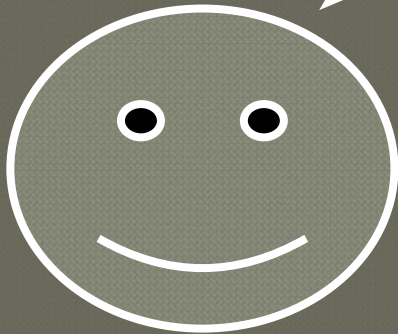
Customer Mental Operation

Decide What You Need

Customer Mental Operation

Decide to order only two items (no browsing)

Select Individual Item

1. Milk
2. Bread
3. Eggs

Name: Milk (1 liter)

Negotiate Delivery

- Where:
  - My House
  - (Use actual address)

- When:
  - By 3:00pm

Negotiate Billing

- My Usual billing

- Credit Card

_____

- C.O.D

Card can be used......

- To represent user´s goals or intentions.

- To represent specific computer screens or task elements.

- To complement PICTIVE as it provides a different granularity of focus.
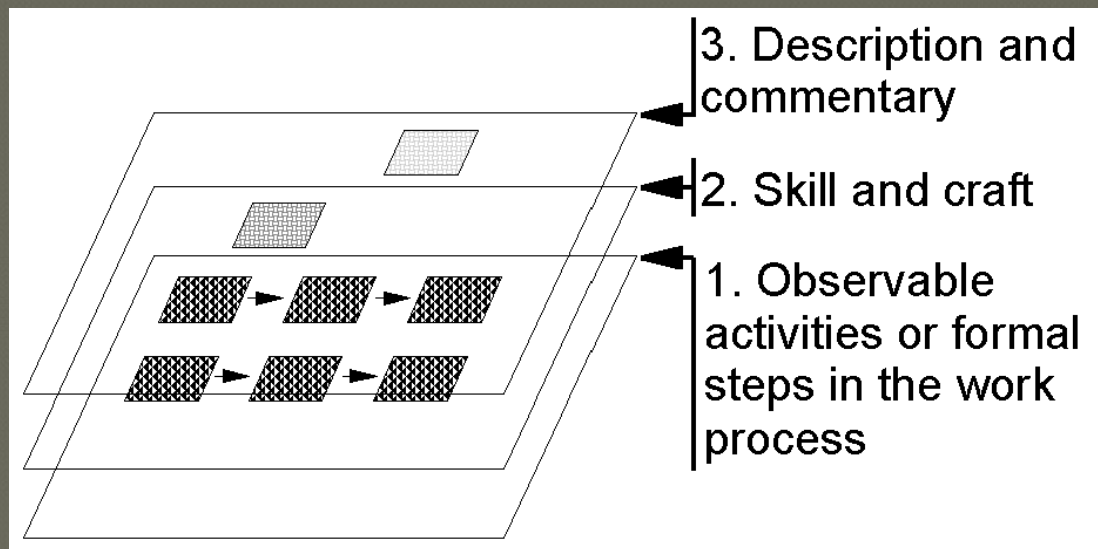
General Characteristics of Card Sessions

- Introducing People
  - Workgroup, interest, technologists, Labour & design
- Introducing Materias
  - Cards, colours
- Introducing Practices
  - Focus on issues, exploration, collaboration and clarificaiton of conflicts.
- Doing the work of Session
  - Proposed workd practice, explore alternatives

Outcomes of a CARD session

- Tangible (concrete)
  - Cards, usually taped to large sheets of paper as posters
- Intangible (nonmaterial)
  - Enhanced personal and organizational communication
  - Improved teamwork
  - Greater organizational cohesion
  - Stronger commitment by the participants to the success of the project
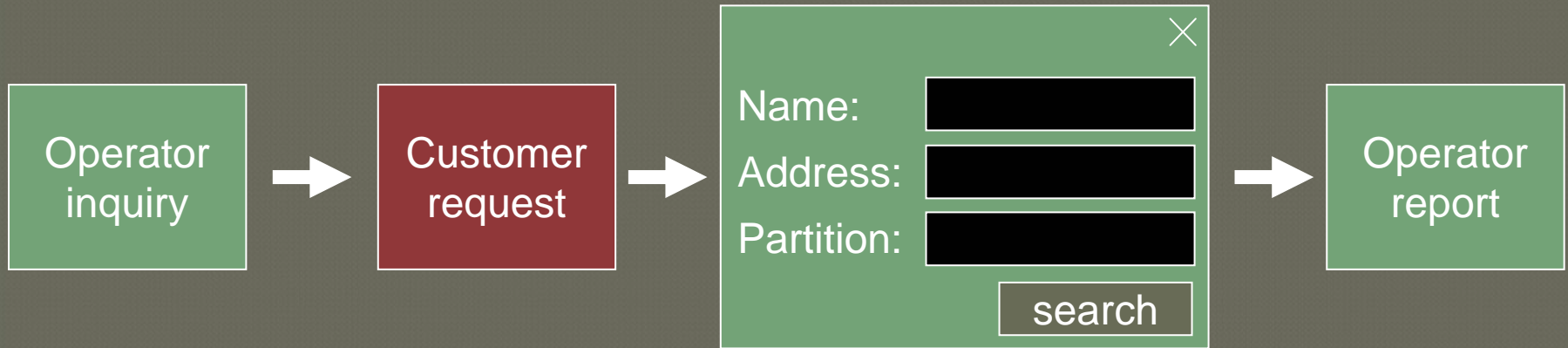
Layered CARD – a new approach

- Cards are conceptually separated into three layers of description and interpretation

3. Description and commentary

2. Skill and craft

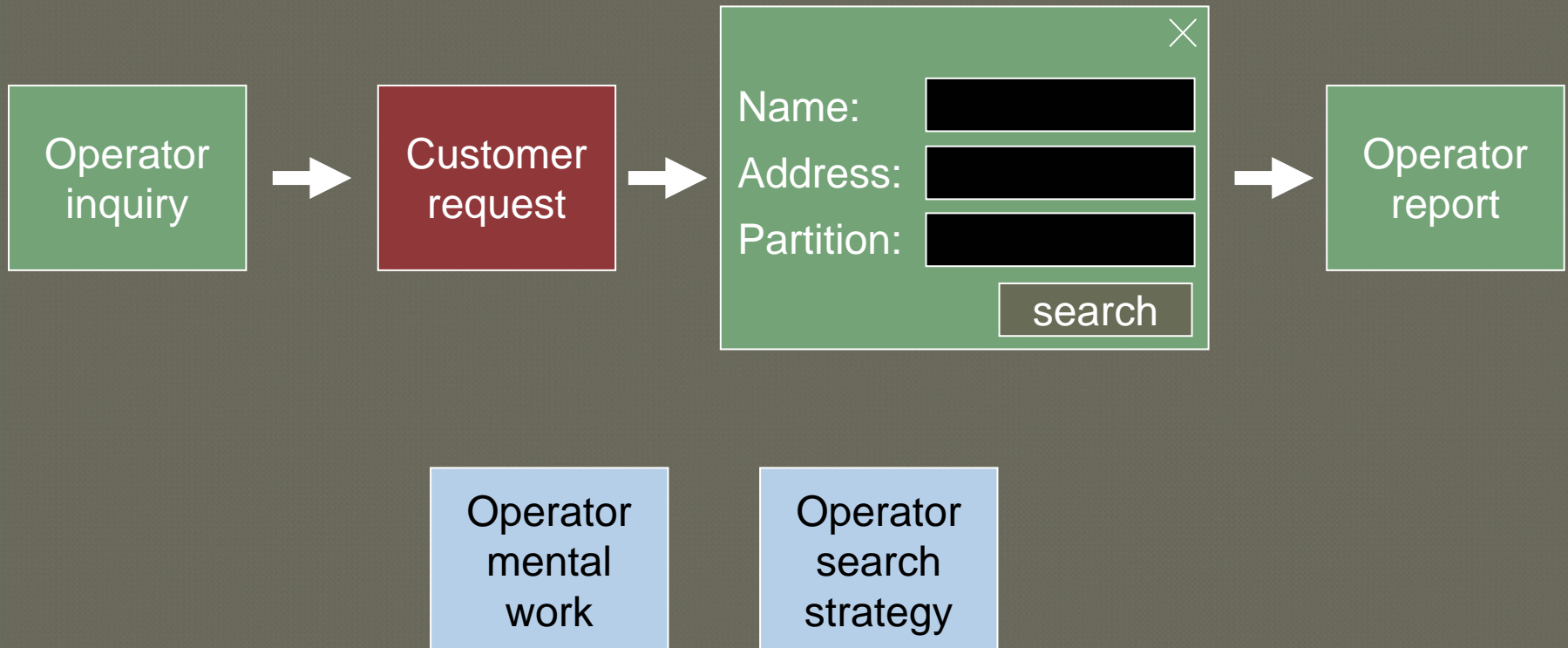1. Observable activities or formal steps in the work process

Case study – Telephone operators

- U S WEST, 1993-1996
- Work analysis of telephone operators (directory assistance)
- Opportunities to automate

- Analysis team: subject matter experts (methods writers, trainers of operators, former operators), an HCI worker
- Posters used for resource-timeline analysis, validation with telephone operators and to communicate the results to the upper management

Preliminary task analysis

Searching for unrecognized components of work

Operator inquiry → Customer request →

Name: ▬▬▬▬▬
Address: ▬▬▬▬▬
Partition: ▬▬▬▬▬
search

→ Operator report

Operator mental work

Operator search strategy

Cards used in the case study

Observable or Formal

Customer request

Customer clarification

Operator inquiry

Operator report

Personal response system

Automatic response system

...

Skill & Craft

Local knowledge
Transformation (listed types)
Transformation (other)
Named search strategy
Unnamed search strategy

Description

New ideas

...

Participant comments

Outcomes

- The analysis helped to make informed decisions regarding technologies, meeting economic bussiness constraints while maximizing opportunities for operators to add unique value to customer's requests.
- Critique earlier analyses of operators' work in HCI, exploring issues of how social assumptions may enter into technological analyses.
- Contribute to an emerging analysis of the importance of "invisible work" (i.e. Work that is not percieved valuable – or even existing – by organizations)

References

- **Layered Participatory Analysis: New Developments in the CARD Technique, Muller, 2001 (http://doi.acm.org/10.1145/365024.365054)**

Future Workshop

User-Centered design, 2009

Alexey Voronov
Anna Baghdasaryan
Zaur Nazibov

Introduction

In general, to change or transform the actual situation of a system you can use two main approaches:

- First to criticize the actual situation, then to dream about a preferable future situation, and finally to find ways to move from the actual situation to a preferable one; or
- First depict a future preferable situation, then analyze the actual situation, and finally find ways to move from the actual situation to a preferable one.

The Future Workshop (or FW) belongs to the first category of approaches. It emphasizes: critique, learning, team work, democracy, and empowerment.

History

In the 1970's, the future workshops have been developed as a tool in the political fight of civil action groups for a better enforcement of their interests to create a future worth to live for.

The founder Robert Jungk wanted to enable and support the development of social fantasy that should lead to conflict resolutions that can be turned against the business-as-usual and the profit-seeking of the establishment.

Origin

Hegel & Marx binary s-e model

American Creativity Techniques

Future Workshop
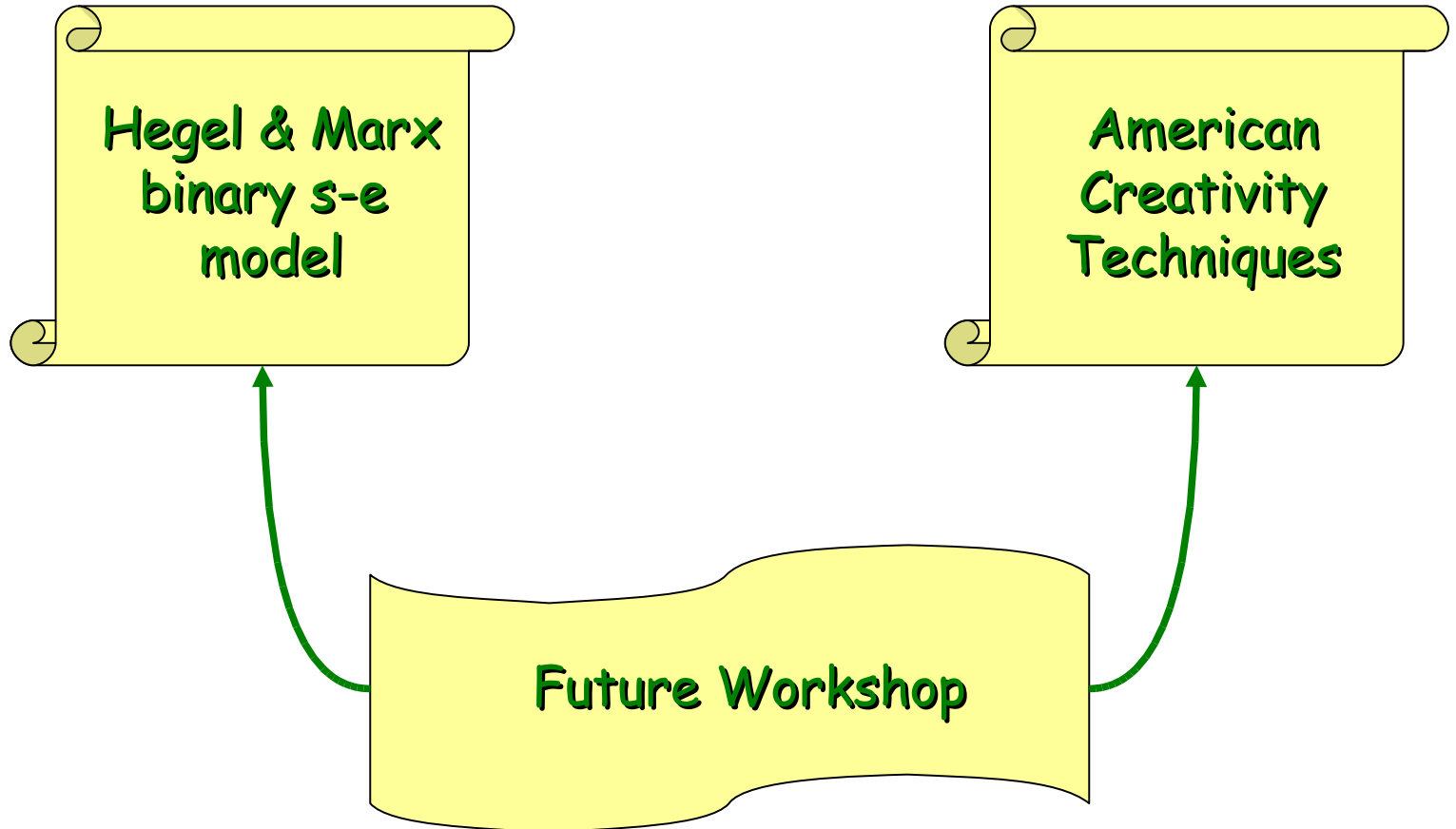
FW" Phases

A "classic" FW, according to Jungk and Müller (1987), consists of four phases:

- The preparation phase;

- The critique phase

- The fantasy phase

- The implementation phase

Preparation phase

Here the themes, the invited participants, the methods,their rules and the time table of the workshop are settle by the organizers of the workshop and the facilitators. The room and local facilities for the workshop are settled.

Critique phase

Designed to draw out specific issues and problems in question/producing a critical understanding of the problem

Steps:

- Collection of critique points (by written cards/brainstorming)

- Systematisation (clustering) on a pin board

- Evaluation, condensation, intensification, priorities

Fantasy phase

- Imaginative introduction (meditation, work, walks ...)
- Turn critique points into the opposite (bad to good) as starting points
- Collect ideas (brain writing)
- Preparing and performing a role play, fable, report, painting, fairytale to a fantastic story (as group work)
- A common analysis of these performances with regard to good solutions/ideas
- Extract, write down an "idea store" on a pin board

Implementation phase

- Evaluate the concepts of the "idea store" with regard to realistic conditions and best fit (PM-method)
- Put in more concrete terms, the best-suited concepts (group work)
- Choose the best one
- Build an action plan: Who does what, where, when and how?

Strengths

- The techniques of a future workshop to make the knowledge and experiences of the participants productive are in greater demand than ever before.
- The process of working hard for a solution results in an intensive identification with the results and so a high acceptance for their future realisation.
- Future workshops are based upon "Social Learning". This form of communication and/or the common struggle to find new resolutions, the presentation in different forms (role plays, drawings, etc.) helps the individual person to find out in their personal reconstruction of reality, what is up.

Problems & Difficulties

- Consistency of the phases, inherent conflicts
- The critique phase – always the best beginning ?
- The effects of creative techniques – a prescribed utopia
- The time factor – same measure for different processes
- The realization of the realization – who will support the group "afterwards" ?
- The role of the moderator
- Dealing with hierarchies and disparate objectives

Conclusions

FW was presented as a method to develop ideas or projects for community development and problem solving in a participative, democratic and cooperative way.

FW is characterised by three main aspects:

- The focus on group dynamics while other approaches focus on methods or on approaches for task solving as the steering factor

- It is based on modern concepts about the facilitation of creative problem solving processes; and

- It emphasises collective work and collaborative learning through the interaction of the participants with the aim of learning how to build, sustain, and develop responsible participative communities.

References

- http://en.wikipedia.org/wiki/Future_workshop

- Heino Apel: The Future Workshop.
  URL: http://www.die-bonn.de/esprid/dokumente/
  doc-2004/apel04_02.pdf

- René Victor Valqui Vidal: Future Workshop

Thank you!!!