



Teleconference #2 Agenda



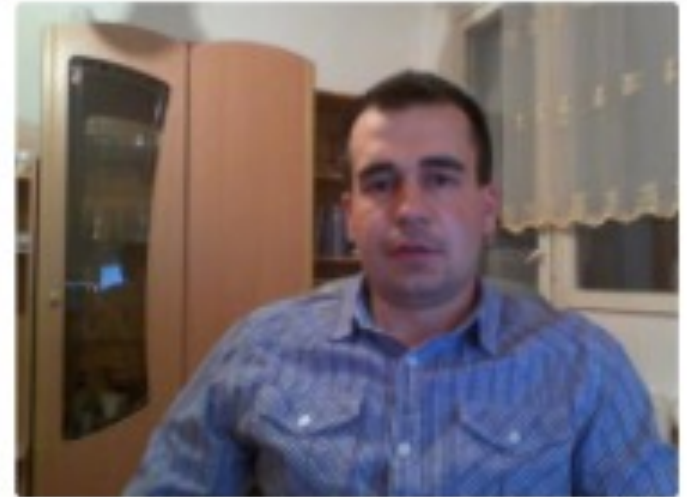
The "Solar collector" Team
August 17, 2015;

Agenda

- **Short introductions**
 - The SHARP Solar Collector (F. Caspers)
 - Intellectual Property (D. Mazur)
 - Solar applications in remote areas (A. Zahnd)
- **Project Milestones Week 1**
 - Future teleconferences
 - (Team name)
 - Decide how to decide
- **Outlook**
 - Statement of work
 - Suggestion on how to proceed
 - How to organize the next teleconferences
- **Comments, Questions and open discussion**

Short introductions

- Zdravko KINANEV

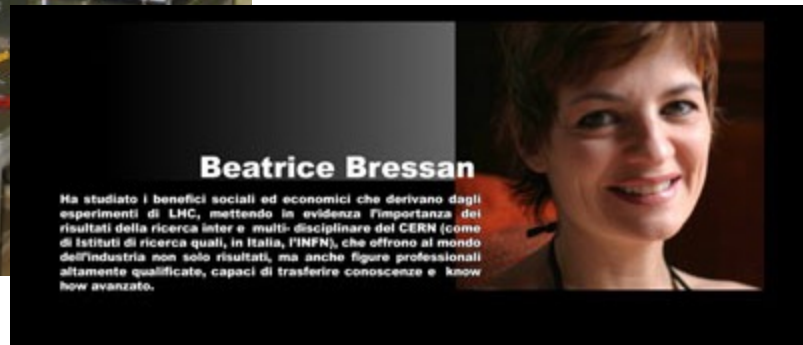
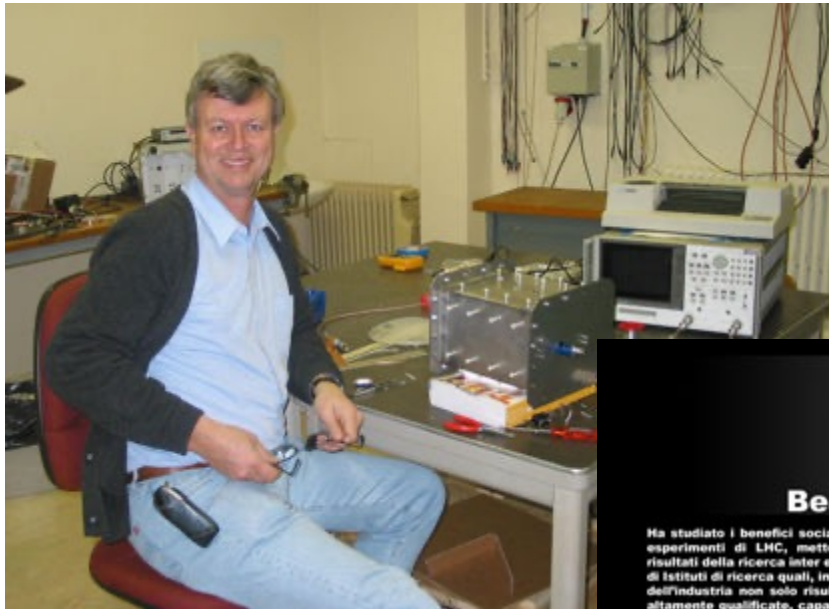


ZDRAVKO KINANEV – SOLAR
STRUCTURES

- Tell us ...
 - ... 3 words to describe you best?
 - ... something unusual/surprising about you?
 - ... a bit about why you wanted to become part of this particular event?

Short introductions

- The SHARP Solar Collector
 - Fritz Caspers/Beatrice Bressan



Short introductions

- Intellectual Property Rights
 - David Mazur



Short introductions

- Solar applications in remote areas
 - Alex Zahnd



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Project milestones #1

- Team teleconferences
 - Every Monday, 19:00 CEST, on VIDYO
 - <https://vidyoportal.cern.ch/flex.html?roomdirect.html&key=mzlgqmJCMRLF>

TC#3: Monday, 24 August

TC#4: Monday, 31 August

TC#5: Monday, 7 September

TC#6: Monday, 14 September

TC#7: Monday, 21 September

TC#8: Monday, 28 September



Project milestones #1

- Team name
 - No illegal or inappropriate disambiguity
 - No copyright/trademark infringements



Project milestones #1

- Decide how to decide
 - Majority vote with expert feedback beforehand, if available
 - Tie-breaker by experts
 - Discussions to convince other party, if possible
 - Smaller decisions: Email-voting for different options with 48hr deadline

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Next major project milestone

- Statement of Work
 - Paragraph of 4-5 sentences
 - Coarse requirements, specifications
 - Probably the **most important** and **most time consuming** milestone, because it will state what you want to achieve and set the direction that you want to go in the next weeks
 - Research and coordination among you necessary
 - Should include a **tangible, physical prototype** in the end



Statement of work

- Example

- **Statement of work - Inflatable fridge team:**

"Our goal is to build an inflatable fridge prototype in order to produce a cheap and easily transportable cooling device.

It should be based on either traditional fridge thermodynamic technology (mechanical) or a thermo-electric system and include a rigid base to house the associated technology, with an inflatable box above.

It should be applicable in situations where transport of the fridge is difficult and a power supply might not be available (for example camping, transporting prepared foods from home to an office/school, humanitarian aid and other field operations).

Applications in the future might include facilitating transportation of vaccine during the last mile, or preventing biological samples and sensitive drugs from decay. Some of these applications should be investigated as a case study."

Statement of work

- Example

- **Statement of work - Body bag Team:**

"Our goal is to build a body bag prototype improving common models in order to greatly delay body decomposition.

Current models are well suited for handling and transportation of the bodies, but they do not properly address the factors which might influence decay. However, preventing decomposition is extremely important for postmortem identification. Our prototype aims to provide reduced temperature, humidity and oxygen concentration within the bag by increasing water and air impermeability. We believe that this is possible to achieve while maintaining a price range similar to current alternatives.

We also intend to study alternative use cases for the same device, such as food storage. Further developments could include active cooling, destruction of bacteria and microorganism which provoke decomposition or MSF epidemiology certification for cases like Ebola. In case our prototype should prove to be successful, we aim to set the prerequisites for large scale production."

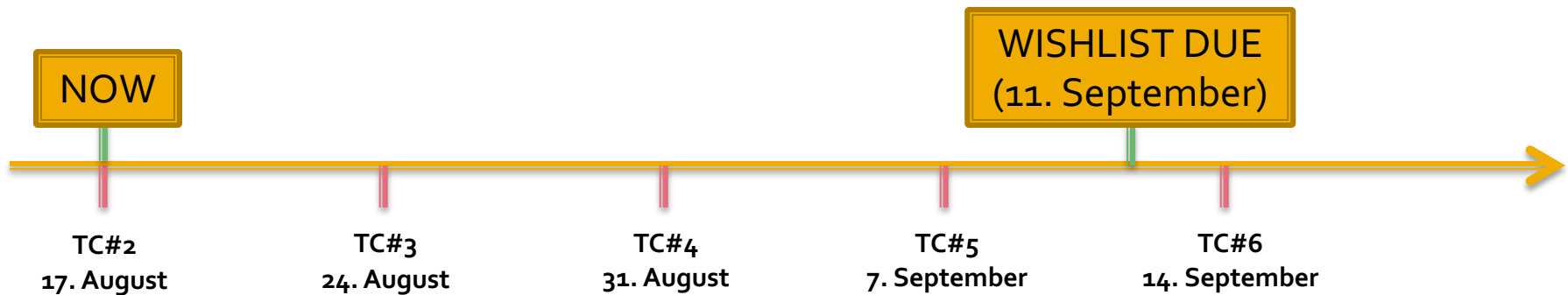
When are the milestones due?

- Deadlines:



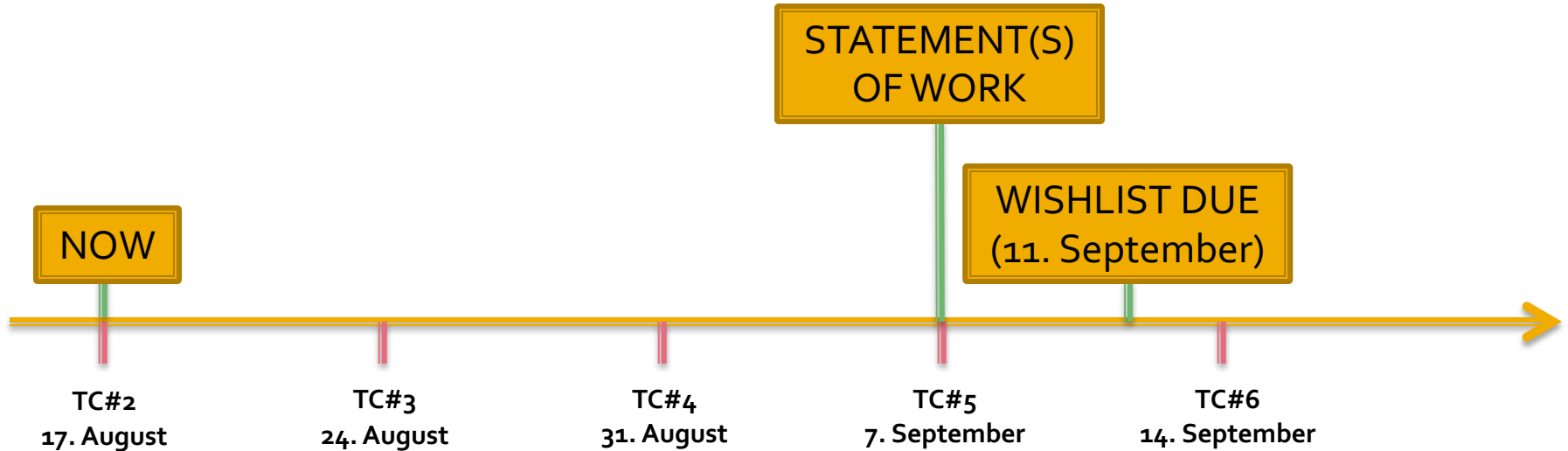
Suggestion on how to proceed

- Deadlines:



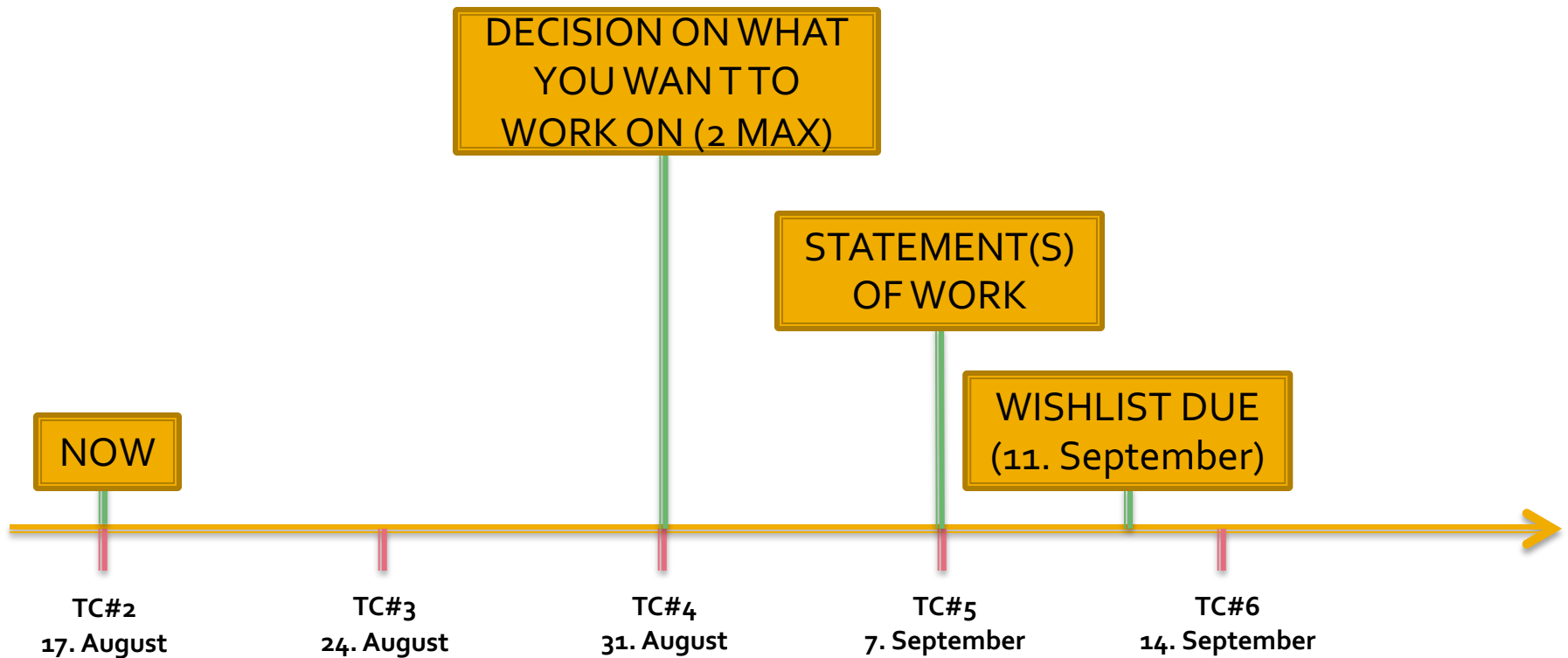
Suggestion on how to proceed

- Deadlines:



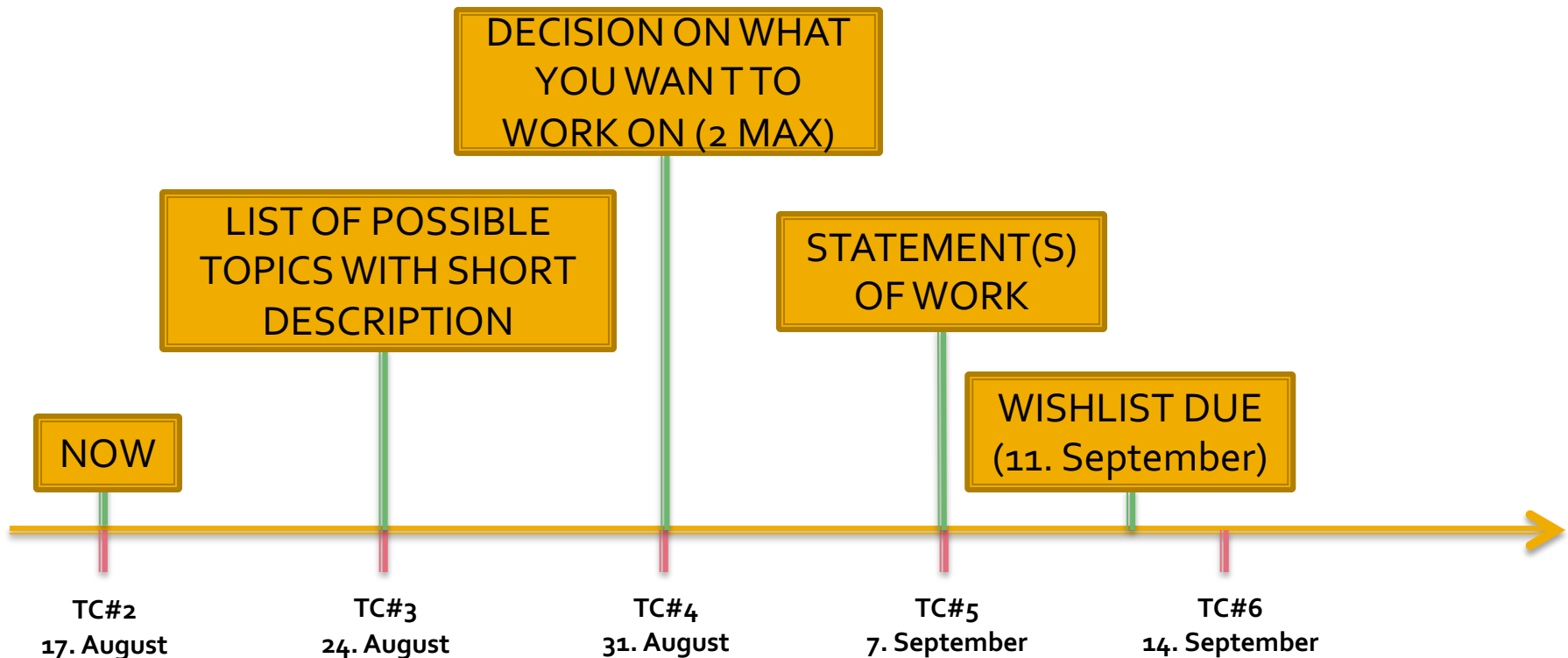
Suggestion on how to proceed

- Deadlines:



Suggestion on how to proceed

- Deadlines:



What to do until next week

- Make up list of possible topics with short description (just 2-3 sentences) on feasible project
 - You are required to do research on possible topics (online, asking experts, publications, etc)
 - Responsibles for research?
 - 8 people → 8 possible topics?

Possible topics (suggestions)

- Improve existing Solar collector unit (e.g. devising “light” and less complex version)
 - Alex
- Hydrothermal Carbonization and other Bio-Processes
 - Jose-Luis-Mukul
- Sterilization of pieces, water, surgery equipment (e.g. in hospitals)
 - Sujata-Ekaterina
- De-salination of water, production of clean water and related processes
 - Ekaterina-Alex
- Electricity generation, e.g. with extremely simple turbine
 - Mukul
- Use as oven/stove (e.g. for baking bread)
 - Jose-Luis, Zdravko
- ? – other possible applications
 - Kitty-Nicholas

What to do until next week

- Suggestion for agenda next week:
 - Short presentations (8x), 5-10 minutes each, on possible topics that you could work on!
 - What would be the goal to achieve? (possible application)
 - Would it be a novel idea? Does it exist already? Would it be an improvement of another system?
 - External help? Experts? Contacts?
 - What would be the tangible prototype? How realistic will it be to build one that works (Technology demonstrator)?
 - Initiate poll to find out preferences (e.g. doodle?)

Outlook

- Next team teleconferences?
 - **Monday, 24 August CEST, 19:00**
 - Moderator and Agenda responsible(s)? - MUKUL
 - Taking minutes, sending out results? - ALEX
 - **Monday, 31 August CEST, 19:00**
 - Moderator and Agenda responsible(s)? - MUKUL
 - Taking minutes, sending out results? - EKATERINA

Misc

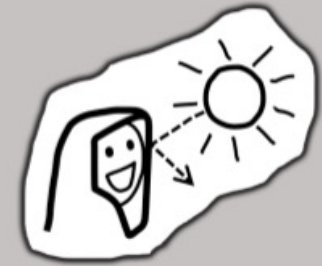
- Possible meeting for Local participants
 - Who would be interested?
 - When would you have time (later this week?)
 - Set up a Doodle
- ISES webinar, 26 August 12:00, on renewable energy
 - <https://www.ises.org/home/>
- World humanitarian day (Geneva, Palais des Nations)
 - 19 August – Inscription deadline TODAY
 - <http://webtv.un.org> (Live feed)

Off-Topic – Children of the Night

- THEPort Pier33
 - Special, local team this year
 - Do you have relevant expertise?



Ergonomic protection
for people suffering
from UV-
ultrasensitivity



Summary:

The genetic disorder Xeroderma Pigmentosum (XP) makes skin ultra-sensitive to UV light. Any exposure to the sun's rays or artificial UV sources (e.g. some halogen and neon lights) can cause fatal skin cancer. People suffering from XP (30 thousand worldwide, most of them children) need special protection, covering all body parts. Several attempts were made to facilitate their daily lives. An improved layout of the currently used head mask and making it available for developing countries would be next important steps.

Goals:

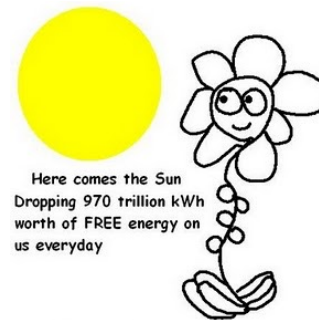
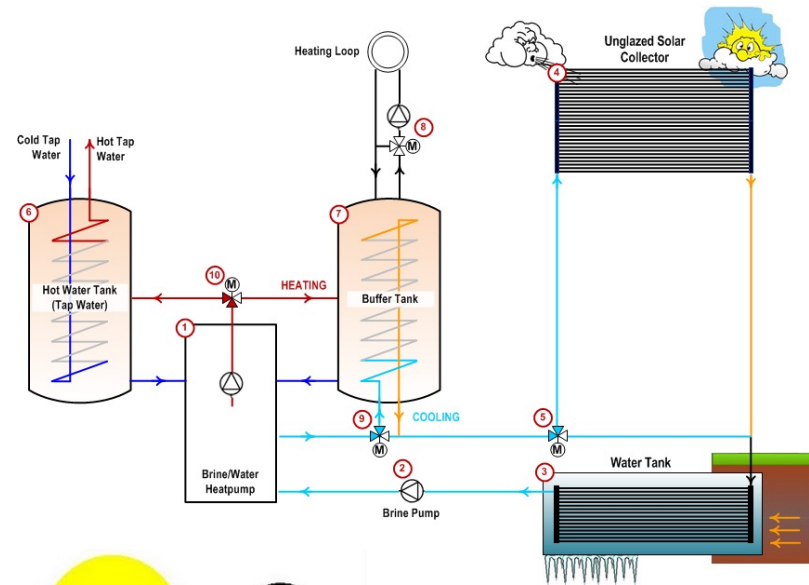
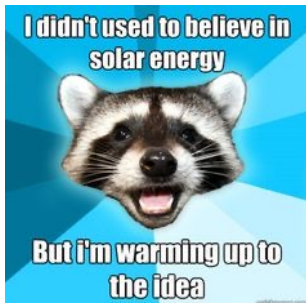
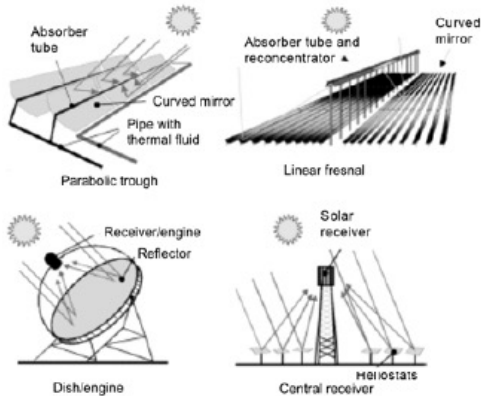
A novel, ergonomic UV protection system prototype covering the uppermost body section around the head should be devised. It should be adapted to the wishes and everyday needs of affected people. A list of such improvements containing ergonomical and technical aspects has been elaborated based on experiences with an already existing device which has been developed by the French Association of XP (Enfants de la lune). This list should be the basis for the new prototype.

Random and misc

■ Comments, Discussions, Questions?

Figure 10-13 Schematic diagrams of the four types of Concentrating Solar Power (CSP) systems

Source: Goswami



Here comes the Sun
Dropping 970 trillion kWh
worth of FREE energy on
us everyday

Copyright Moise Levi