

Using Visuals as a Development Tool



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keywords

visual

illustration

product development

technical communication

biography

Hans is an electrical engineer with 25 years experience in technical communication. Since 1986 he has worked as a consultant in advertising agencies and different technical consultant companies. Besides producing technical information objects such as printed matter, web-pages and on-line help, Hans has extensive experience in teaching users of systems like industrial robots, automation products and different telecommunication systems.

abstract

The benefits of using visuals in technical communication are well established. Visuals help to describe a product and to guide the user in handling the product. What is less evident is that visuals can be effective in the *development of the product itself*. Using visuals – made by professional communicators – at an early stage in development, will improve internal communication within the project team, and result in faster development time. Technical communicators can help not only with the product documentation but also with the product development itself.

Background

Why visuals?

Traditionally visuals are used in different information objects like:

- Brochures, presentations and other descriptive information objects
- User instructions and manuals.

What perhaps is less obvious is that visuals created by communication professionals like technical communicators and industrial designers, can help a project team *to develop the actual product*, this at a stage when the production of the user instructions is very far away. Traditionally, visuals have some features that are useful in both end-user instructions and in visuals as a development tool. Some of the features are actually more important when visuals are used as a development tool.

Benefits with visuals	Importance; _ =not important, __ =important, ___ =very important	
	In user instructions	In development process
Language independent	___	In general: _ International projects: ___
Instant overview	___	___
Common understanding	-	___
Easy to digest	___	___
Easy to comment on	-	___

As stated in the table above the 3 most important features of visuals used in the development process are:

- Instant overview
- Common understanding
- Easy to comment on.

Case A: An improved industrial vacuum cleaner in 3 days

The background

In May 2002, a virtual product design project was conducted in the Swedish Product Design Exhibition “Konstruktion & Design” in Gothenburg. The name of the project was “Product development in 3 days” and was sponsored by The Association of Swedish Engineering Industries.

During three days a project group was supposed to make a product design of something they did not know beforehand. The tight schedule was:

Day 1: Presentation of the product to be developed, project start, definition.

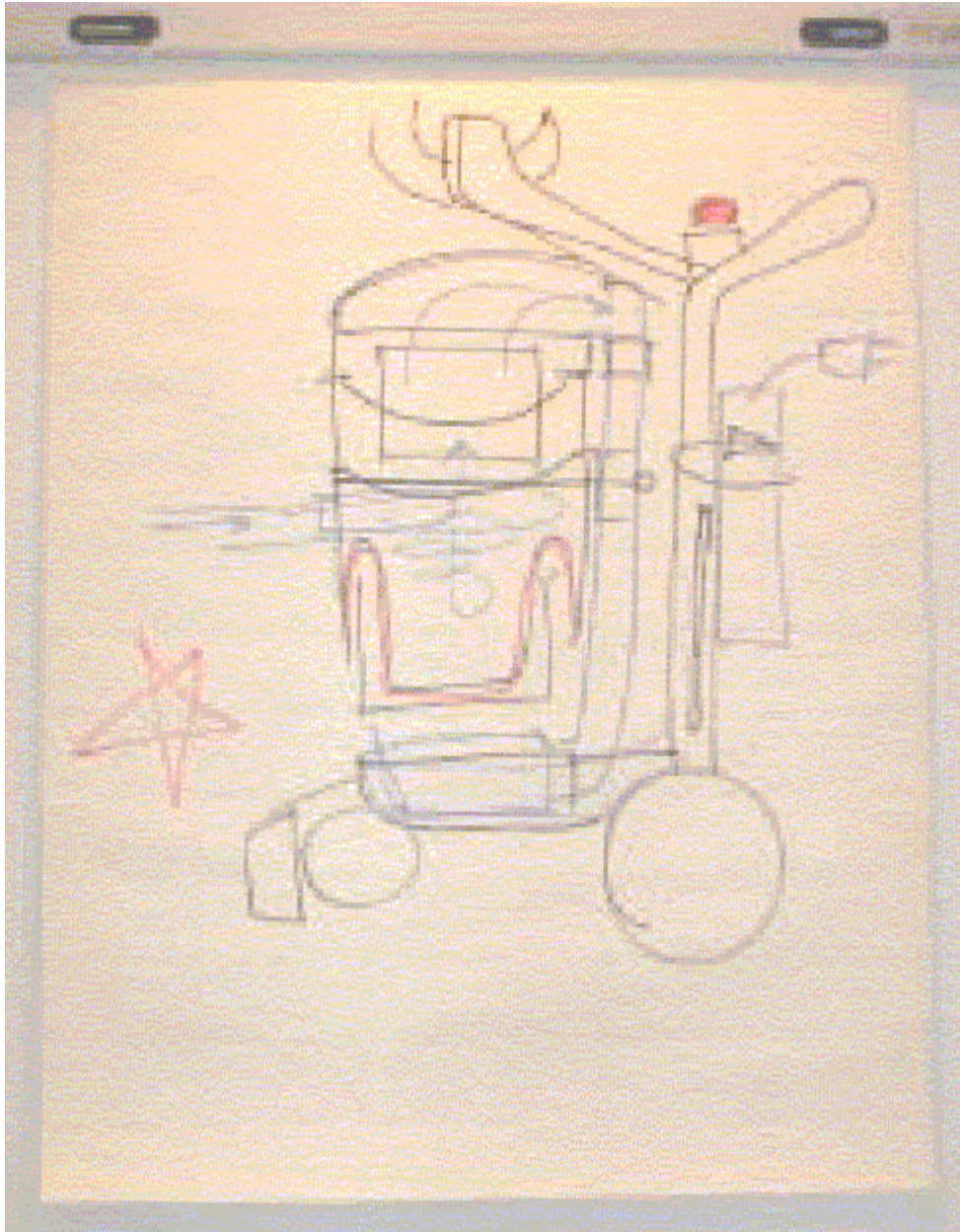
Day 2: Functional analysis of the existing product, generation of alternative concepts.

Day 3: Basic design, concept enhancement, project closure.

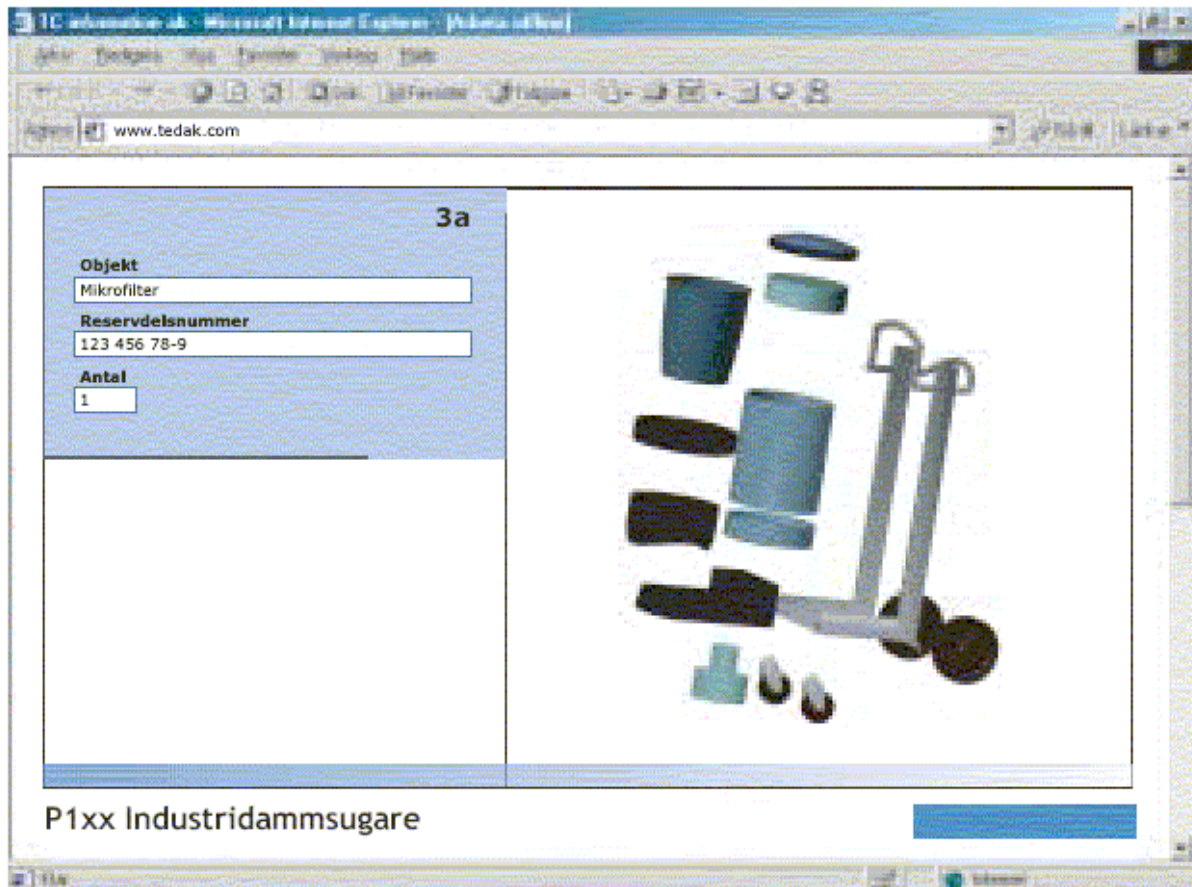
The solution

A project team of about 10 people was formed and among them an *industrial designer* and a *technical communicator* (companies represented: ProTang, Nimba and Ergonomidesign). The project was continuously documented in a number of reports by the technical communicator.

Right from the start, the project group was united by a common view in favour of illustrations, since everyone understood the project status.



An early sketch of the concept selected.



The proposed web based spare part catalogue, created as a part of the product development project.

The result

Even though the project task seemed almost impossible to solve in this short time, the project group presented a final CAD model of the new product after just 3 days. One of the factors adding to the success was the continuous use of illustrations and project documentation. By this documentation everyone in the project had the same information quickly and was aligned with the other members of the group.

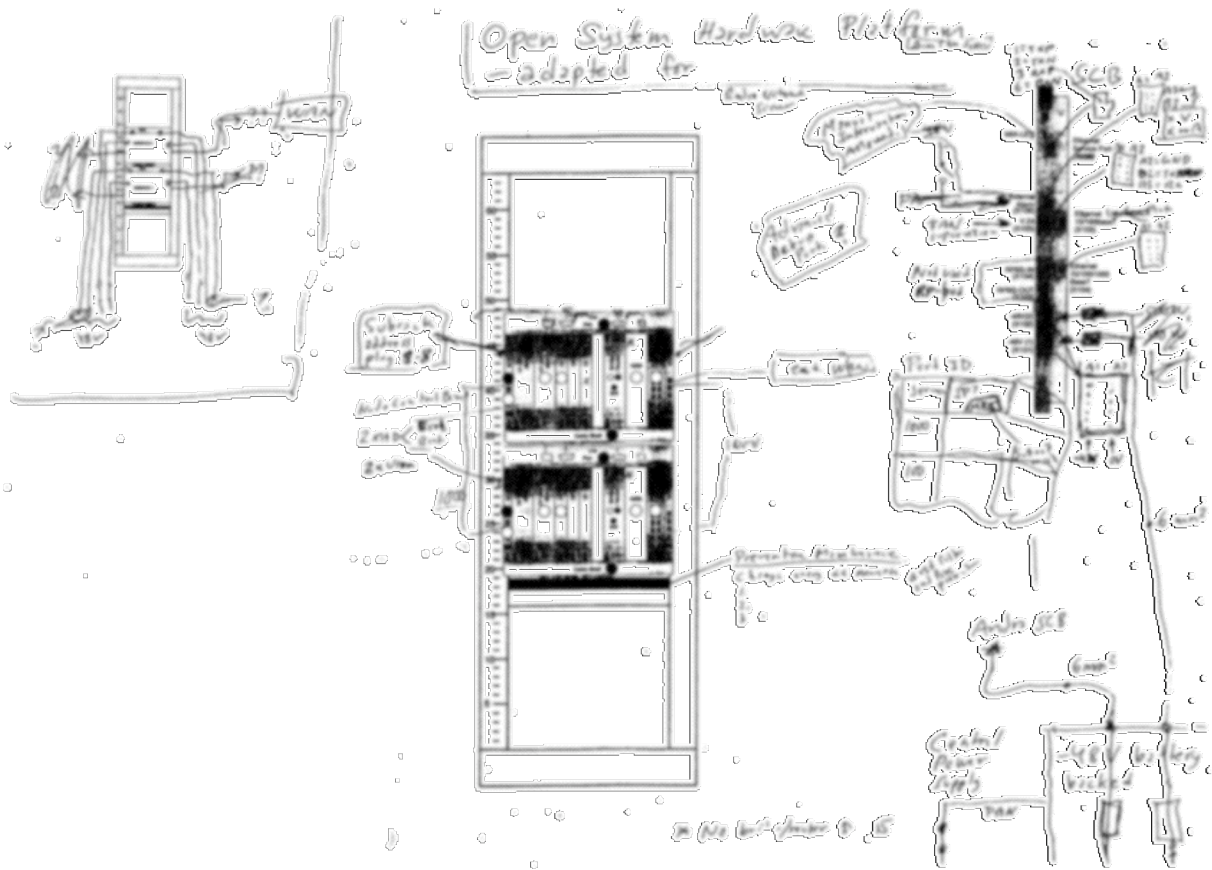
Case B: A complex high-availability computer system

The background

The technical communicator was involved early in the development project to produce descriptions and installation & maintenance instructions of a new server platform hardware. Even though the overall architecture was set, the detailed design was not yet ready. As in many projects the design engineers were very occupied and did not give priority to reading extensive draft manuals.

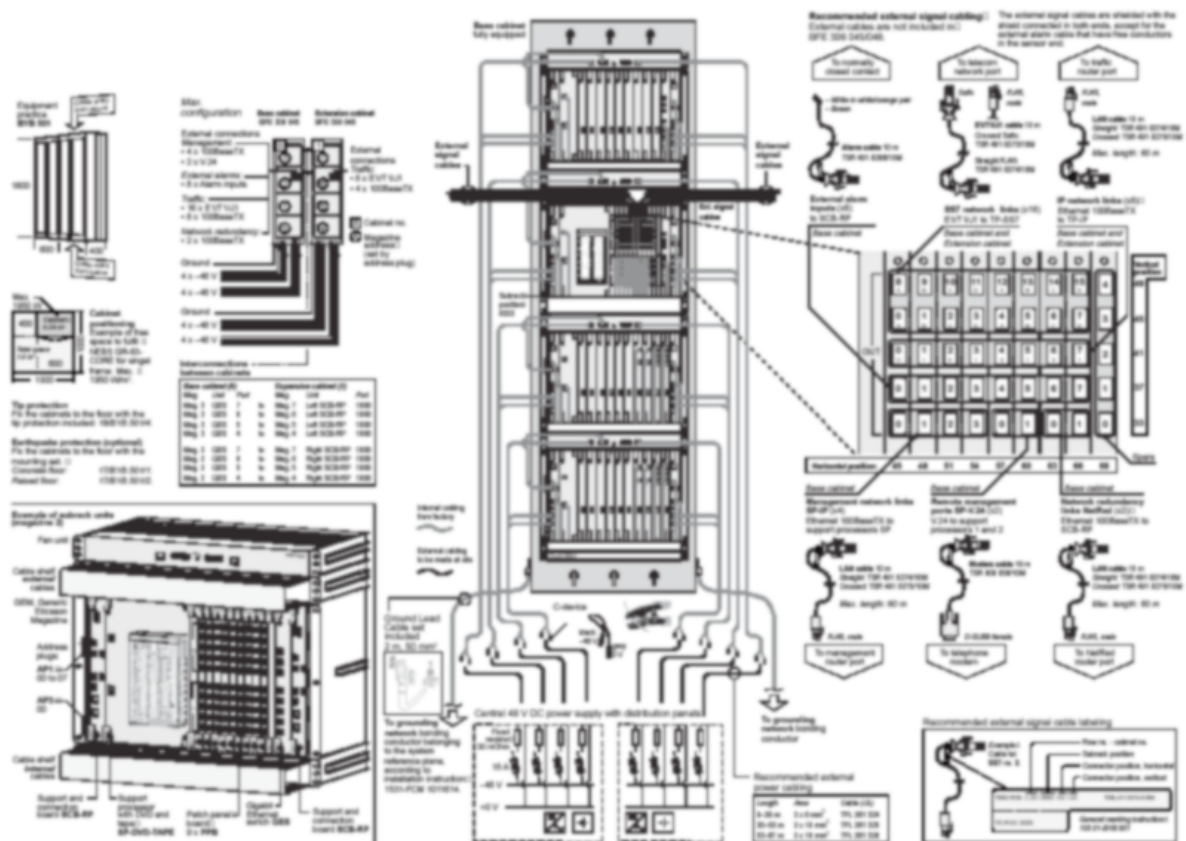
The solution

Instead of starting to write “instruction drafts” the communicator decided to draw only pictures for the first month. A simple sketch on A3 paper was used right from the start.



The first sketch of the product, based on a small amount of available information (the illustration is intentionally fuzzy).

During the next four months, the simple sketch was developed, reviewed, developed, reviewed etc. and resulted in a very detailed specification of the product.



The final descriptive drawing of the product (the illustration is intentionally fuzzy).

The result

Minimal disturbance of design engineers: Instead of reading a lot of descriptive text, the engineers could easily comment on the “A3”.

Common ground: During the project meetings, the “A3” was used as a reference poster. It was easy to point and talk about a specific part. The “A3” was then updated after each project meeting.

Fast manual production: When the “A3” was finalized, all information and illustrations required for the instruction manuals were there. Making the instruction manuals was a matter of days, splitting the “A3” into step-by-step instructions with text and illustrations.

Conclusion

Technical communicators can help product development projects to a higher efficiency. Using visuals will improve the intra-project communication and can result in:

- Faster identification of problem areas.
- Minimized time spent on getting a „common ground“.
- More focused project members.
- And, in the end... better products.

In addition, the technical communicator gets a jump-start in producing the user instructions!

references

Produktutveckla i 3dagar.nu

<http://www.3dagar.nu>