

## Problems

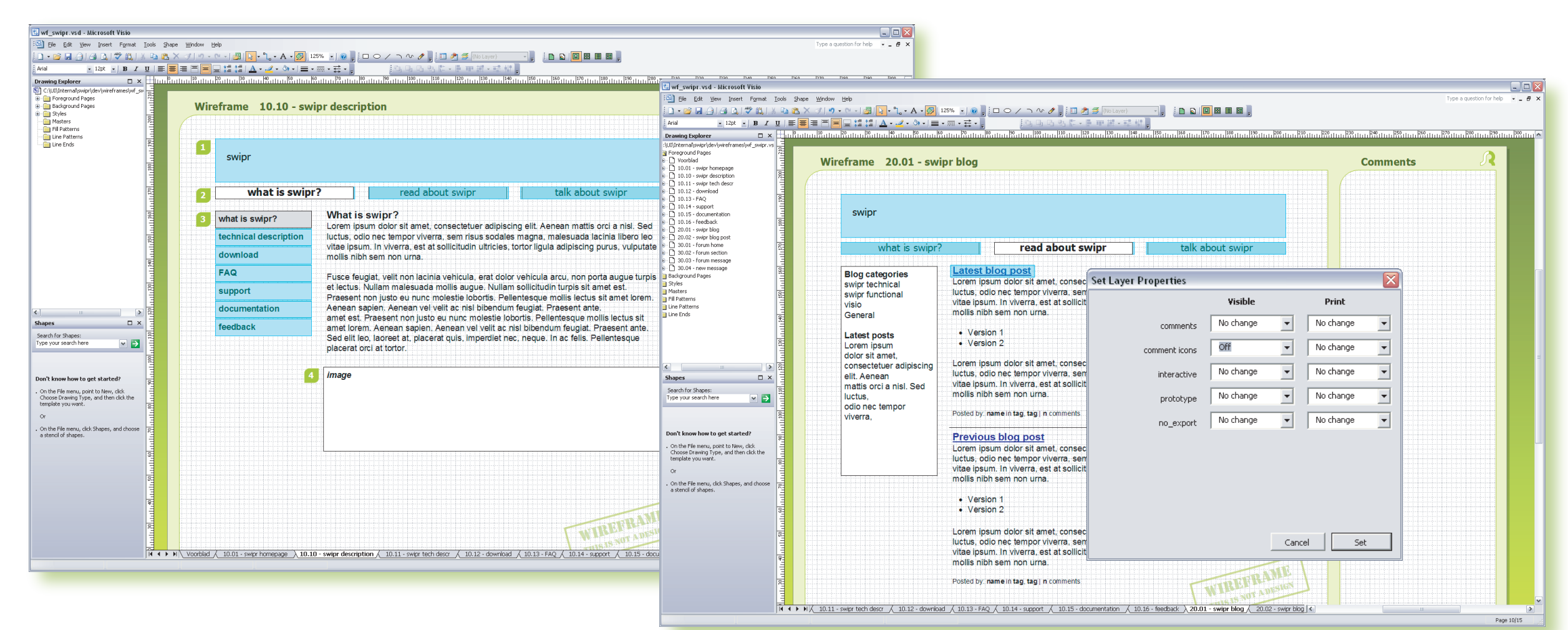
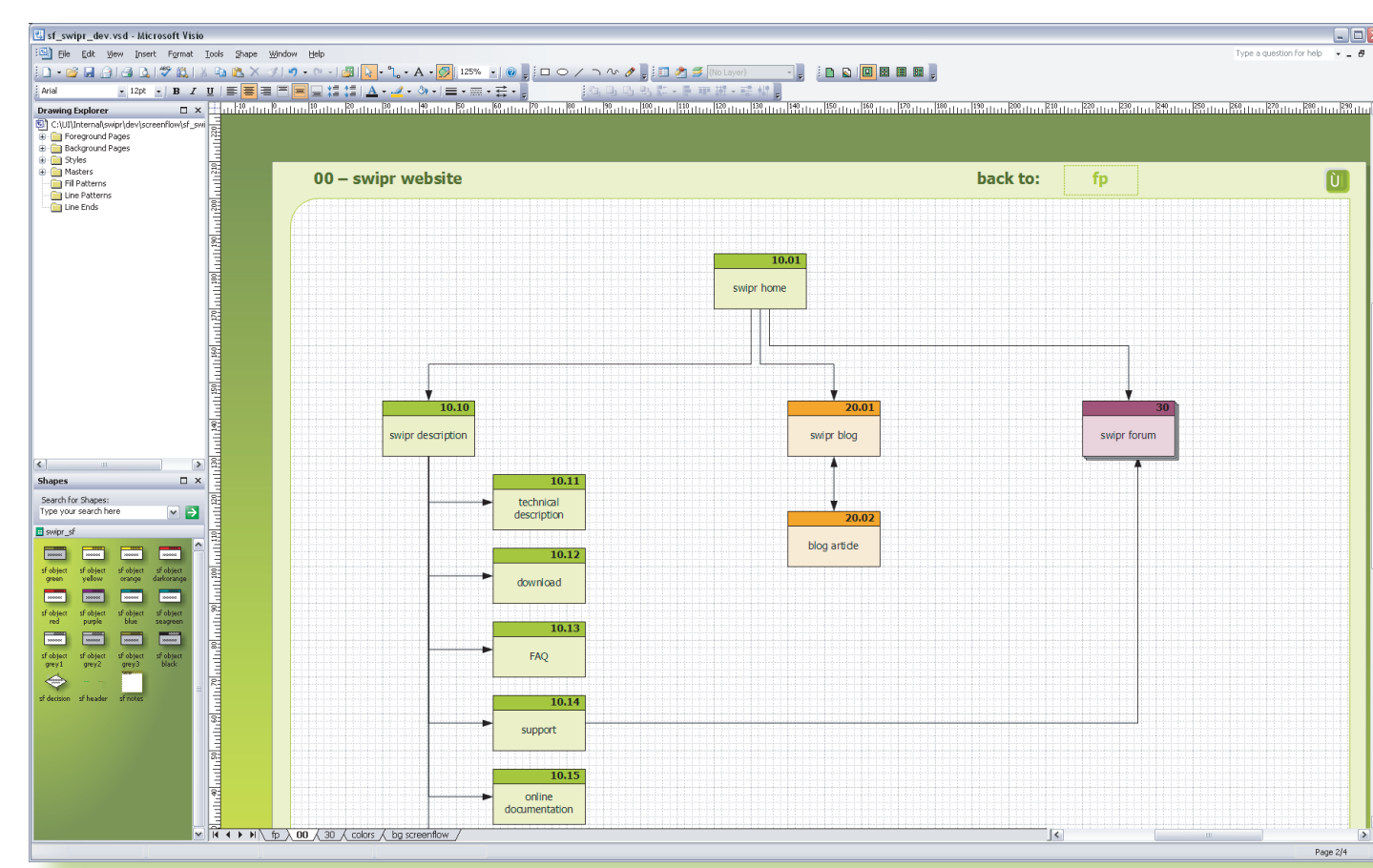
- separate deliverables like screenflows, wireframes and functional designs regularly confuse the client;
- relationships between the deliverables are hard to visualise and maintain;
- early prototypes for usability testing are expensive and time-consuming to develop;
- Visio files are not readable by everyone or require the download of a separate reader;
- HTML generation from Microsoft Visio offers limited functionality and limits customisation.

## Ideas

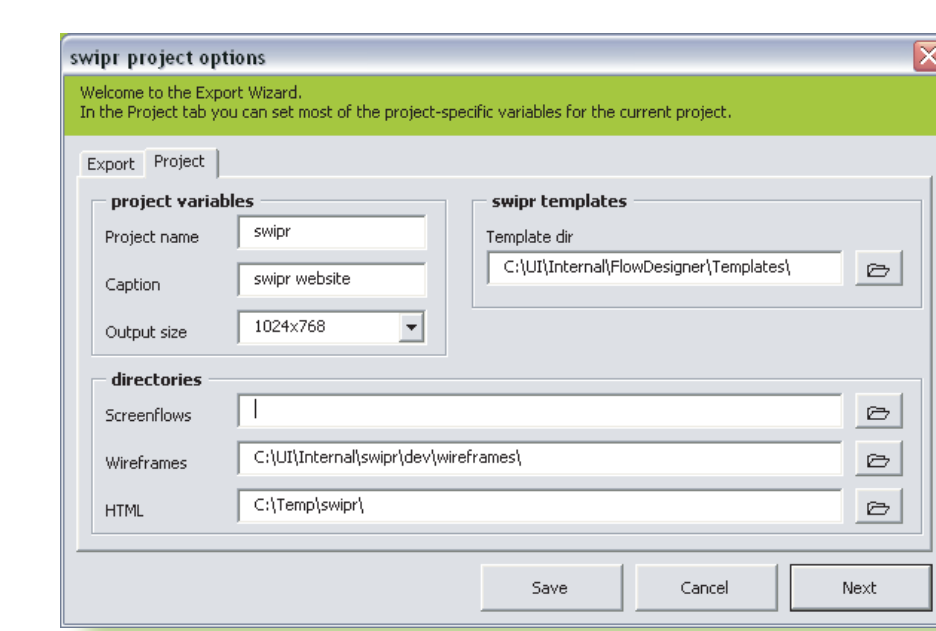
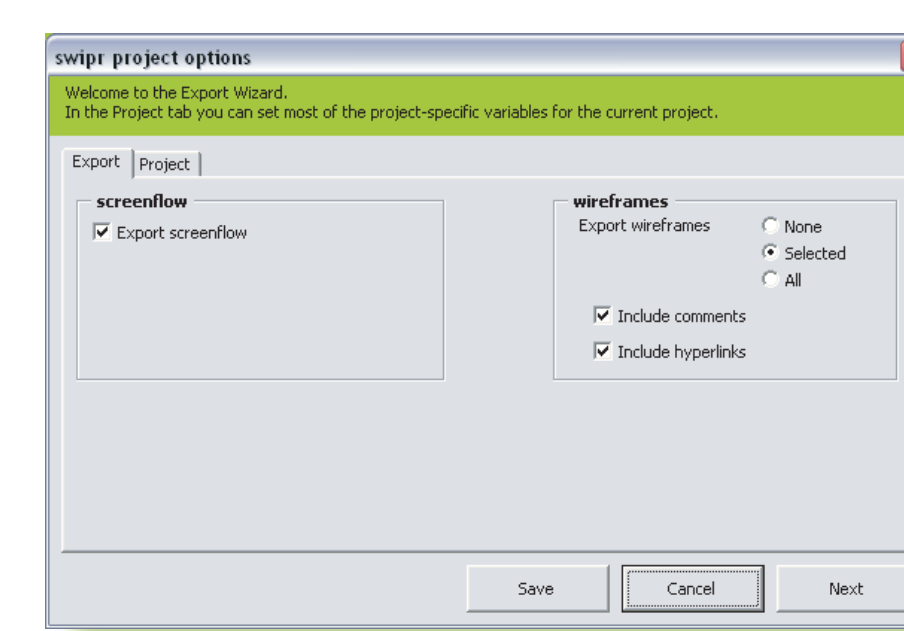
- integrate the separate deliverables into one deliverable, thereby showing the relationships between them;
- use Microsoft Visio's built-in HTML export function for the screenflow;
- create a mechanism (naming convention) for linking the screenflow with wireframes;
- allow the user to zoom in from high-level screenflows to more detailed views;
- allow the user to view wireframes and comments (in a popup window) from the screenflow document;
- create an early prototype from linked wireframe images.

## Solution

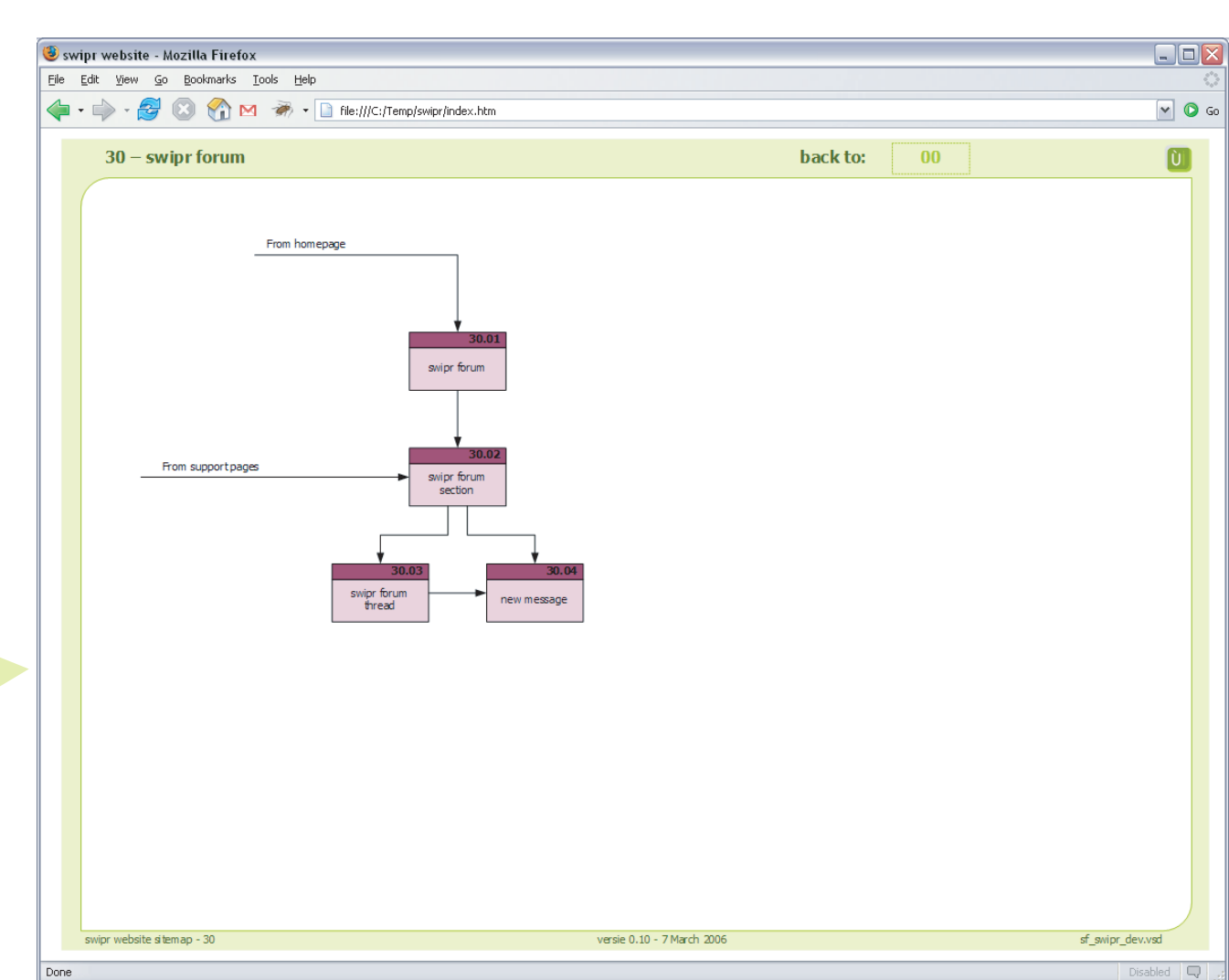
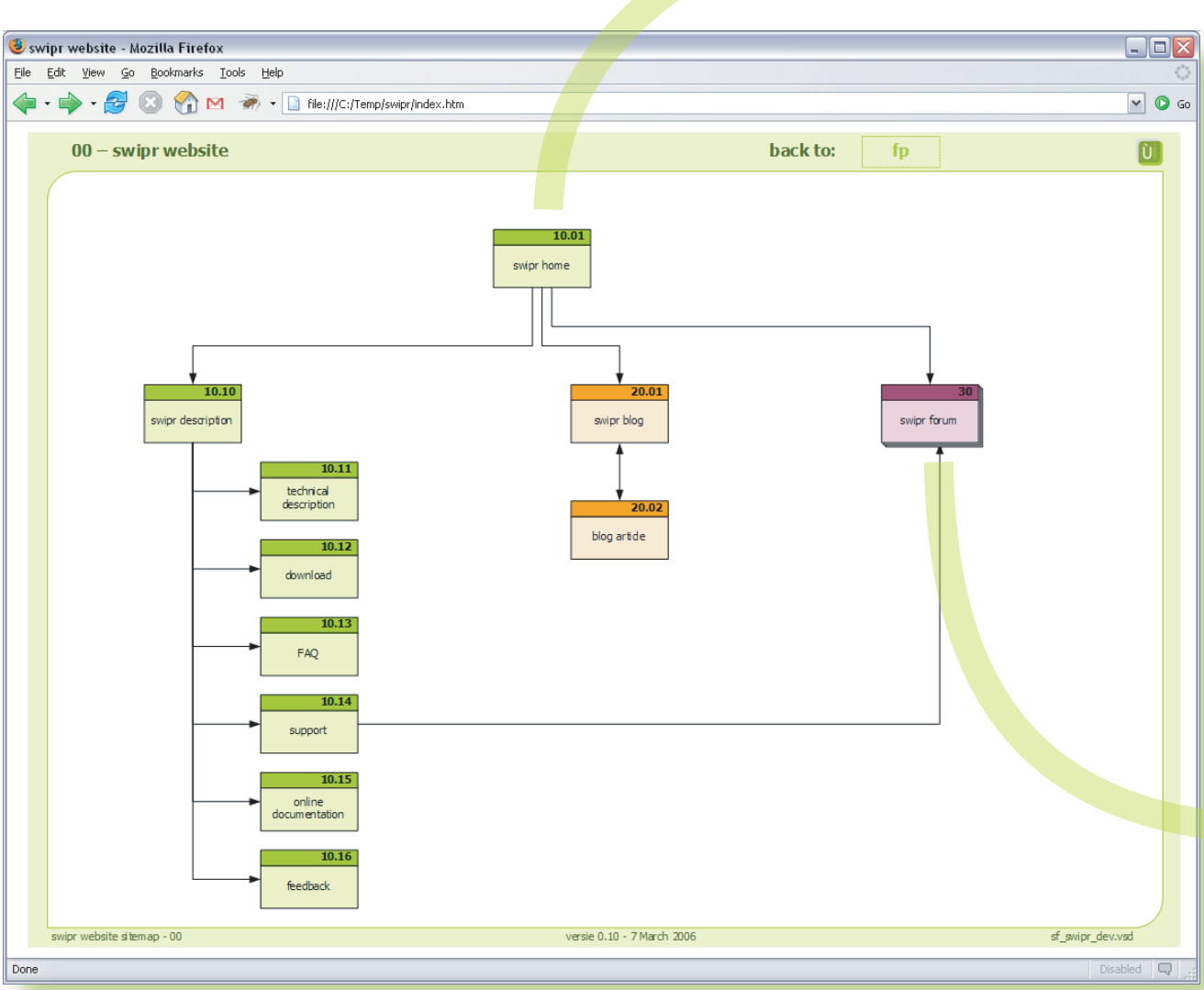
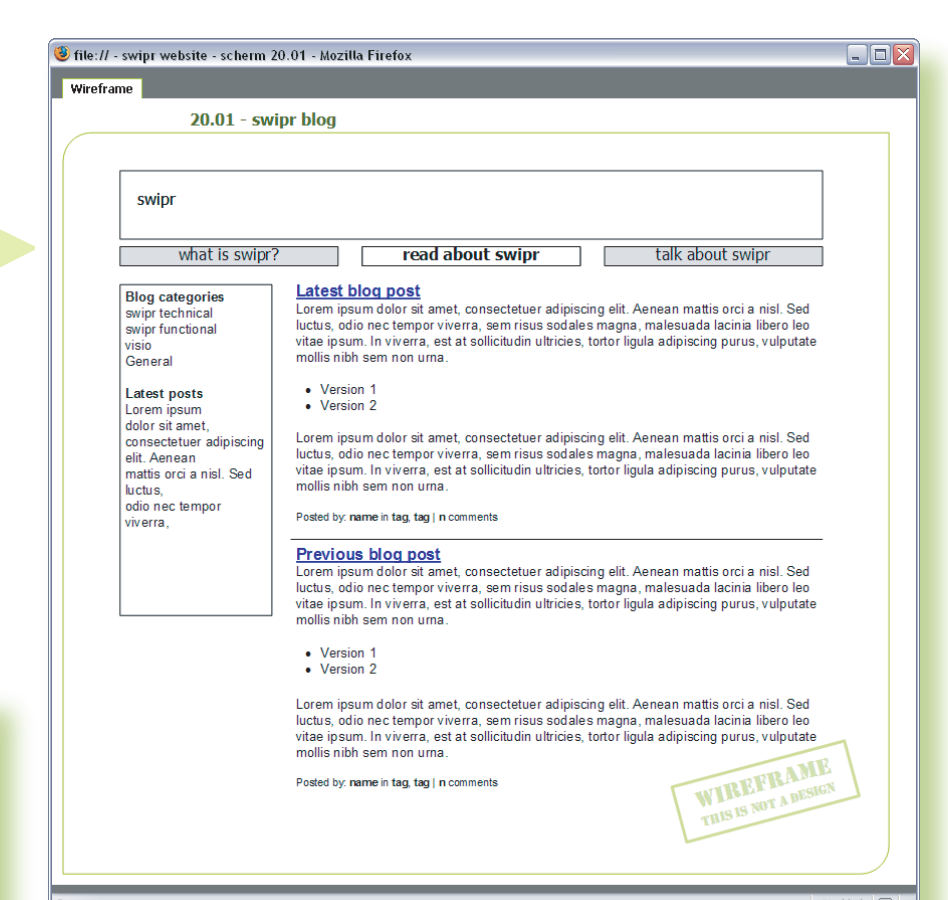
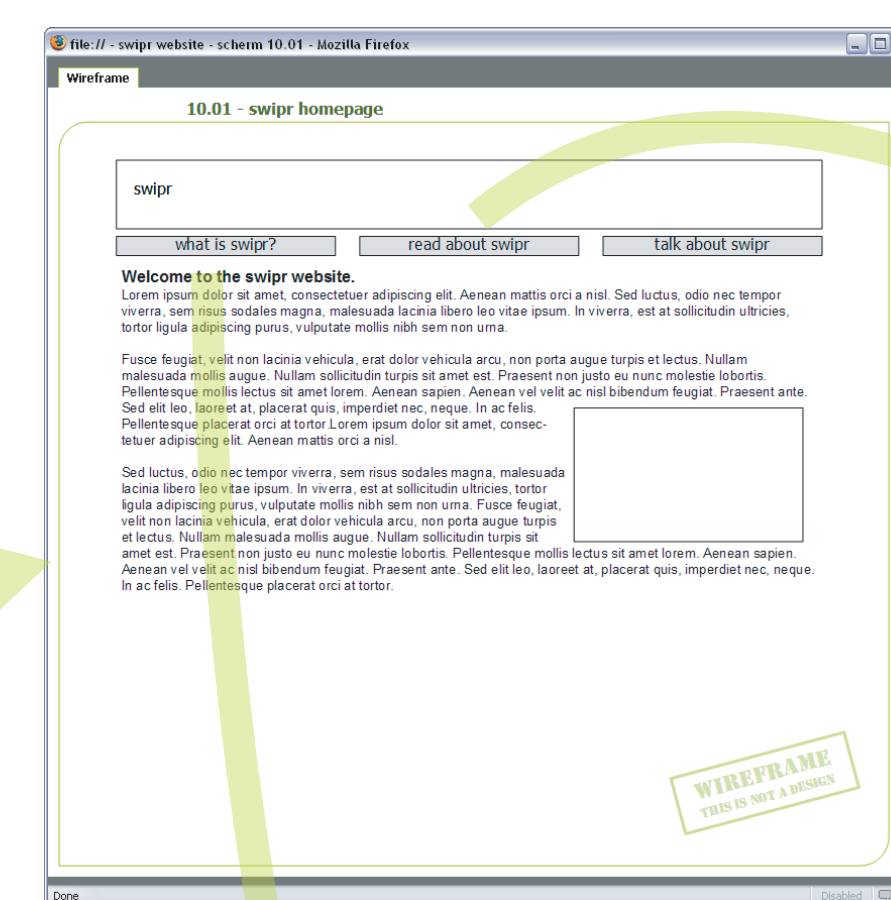
- create deliverables in Microsoft Visio, based on templates and stencils;
- align naming of screenflow objects and wireframes;
- define hyperlinks within the wireframes.



- export the screenflow and wireframes using custom functions written in Visual Basic for Applications
- choose what to export - include comments, include hyperlinks, etc.;
- sit back and wait until the export process has finished.



- the result is a set of HTML files and images that are linked and therefore easily navigable;
- everybody can see the integrated deliverable, navigate through the screenflow and view the wireframes without special plug-ins or software;
- the wireframes will have hotspots that allow navigation between wireframes, and lends itself to early presentation of concepts and usability testing.



## Technical description

- use stencils with customised objects to automatically create links within the screenflow and javascript links to wireframes in a popup window;
- use Visio's "Save as Webpage" function to save the screenflow as a set of HTML pages and then modify the exported HTML;
- use VBA macros to save individual wireframes as images and comments as HTML files;
- create javascript functions and HTML templates to integrate wireframe images and comments as tabs in a single popup window that will be called from the screenflow;
- use a specific layer in Visio to define interactions and translate these to image maps that are included in the wireframe popup window;
- pull all of this together into one, integrated and interactive deliverable, using some extra javascripts.

## Benefits

- clients have a better understanding of the deliverable, which significantly improves workshop efficiency;
- deliverable can be placed on a shared webserver - no more multiple versions in the organisation;
- interactive prototypes generated directly from Visio wireframes provide the opportunity for cheap early usability testing! ;
- clients sell "their" ideas at a very early stage within their organisation;
- improved communication with developers, quality assurance people and other project members;
- easy integration of other elements such as mock-ups, validation rules and other screen-level information.