

WWW

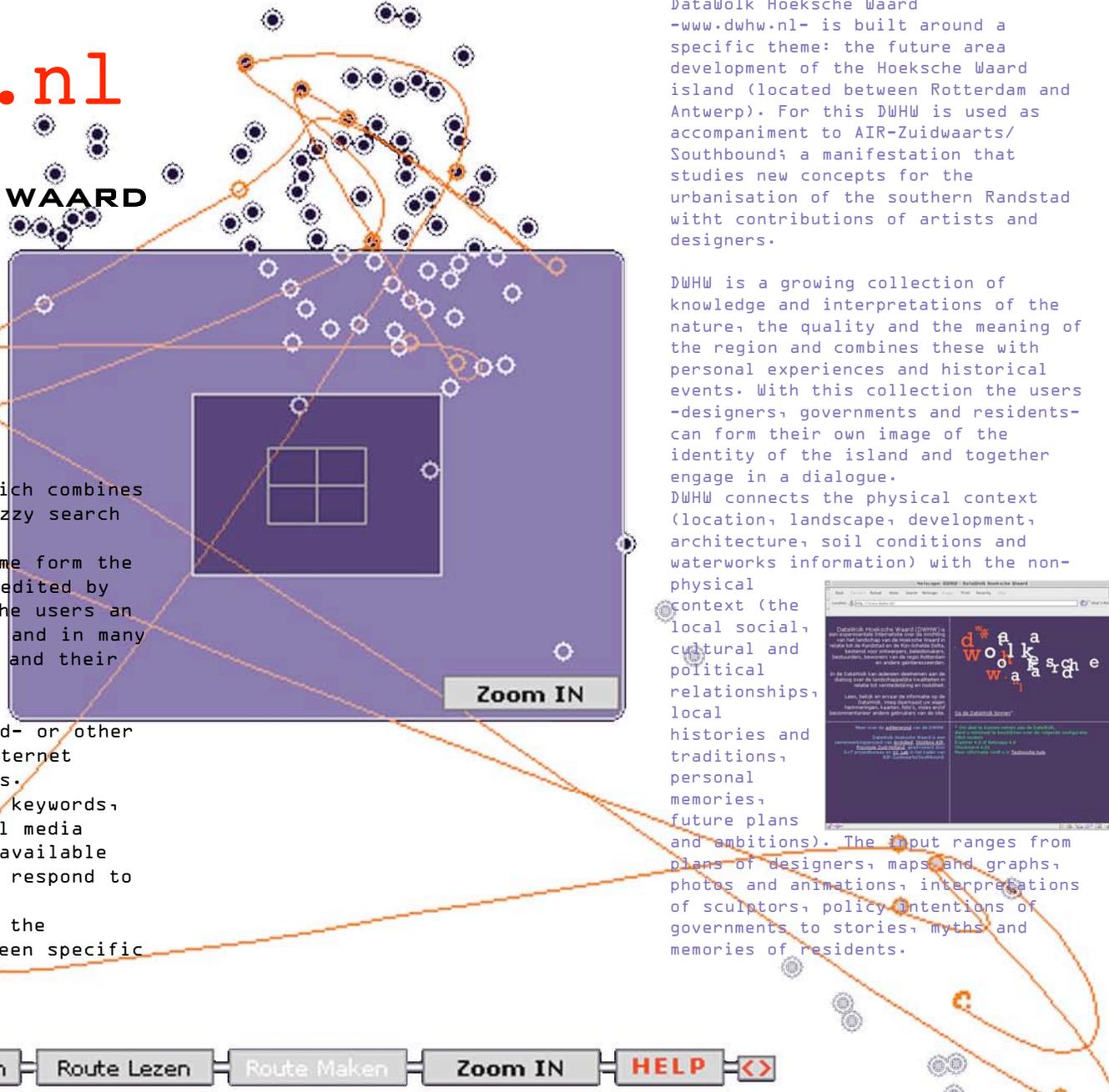
dwhw.nl

DATA WOLK HOEKSCHE WAARD

The DataCloud is an Internet environment, which combines the characteristics of a knowledge map, a fuzzy search engine, and a platform for dialogue. Separate media objects around a specific theme form the basis of the DataCloud, which are placed or edited by the users themselves. The DataCloud offers the users an instrument to receive insight into a complex and in many respects impalpable structure of information and their mutual connections.

The media objects can be text-, image-, sound- or other files; the possibility to open them in an Internet browser is the criterion for the file formats. Attributes are added to every object (title, keywords, date, name of submitter, etc). The individual media objects can be intuitively ordered and made available based on these characteristics. The user can respond to each object separately by expanding (some) characteristics, by adding text reactions to the particular object or to place relations between specific objects and store this set separately.

Object Zoeken Object Maken Route Zoeken Route Lezen Route Maken Zoom IN HELP <>



DATAWOLK VERSION 1.0: DWHW

The first version of the DataCloud, the DataWolk Hoeksche Waard -www.dwhw.nl- is built around a specific theme: the future area development of the Hoeksche Waard island (located between Rotterdam and Antwerp). For this DWHW is used as accompaniment to AIR-Zuidwaarts/Southbound; a manifestation that studies new concepts for the urbanisation of the southern Randstad with contributions of artists and designers.

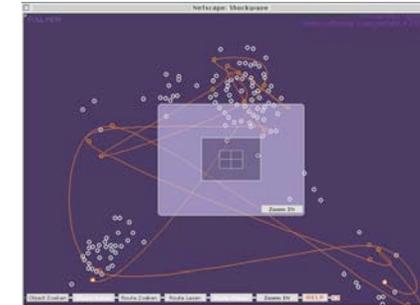
DWHW is a growing collection of knowledge and interpretations of the nature, the quality and the meaning of the region and combines these with personal experiences and historical events. With this collection the users -designers, governments and residents- can form their own image of the identity of the island and together engage in a dialogue.

DWHW connects the physical context (location, landscape, development, architecture, soil conditions and waterworks information) with the non-physical context (the local social, cultural and political relationships, local histories and traditions, personal memories, future plans and ambitions). The input ranges from plans of designers, maps and graphs, photos and animations, interpretations of sculptors, policy intentions of governments to stories, myths and memories of residents.



DWHW, BEHAVIOUR AND INTERFACE

DWHW is designed for a very diverse target group of designers, artists, residents, and administrators. Because this group has very diverse experiences with Internet, the choice was made to create a custom browser. The default



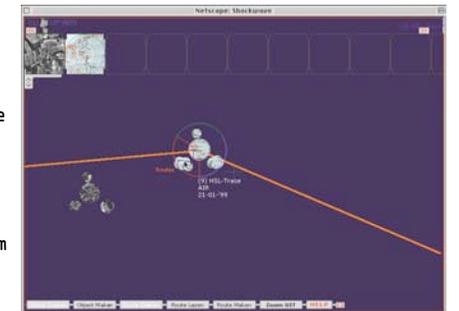
browser buttons and navigation tools are not used. In the DataCloud browser, the user quickly feels like he is not on the Internet anymore. A new set of buttons and tools is specially developed for the actions that the user can take within the DataCloud.

The interface provides access to information that is collected in the DataCloud by

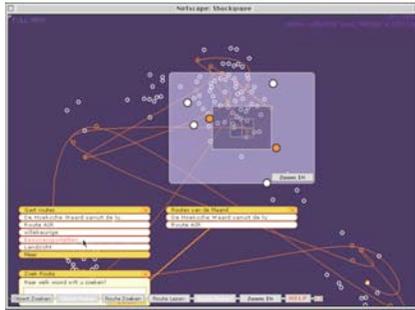
means of a kind of 'knowledge map' of information objects. To achieve that every more or less defined unit of information is contained in a so called 'media object' (MO). Several characteristics are assigned to every MO that describe the MO (including keywords, location, creator). This way every MO can be assigned one exact position in an imaginary multidimensional space. MO's that show similarities -based on their characteristics- with others are automatically placed close together in this space

<full view>

The first screen shows the total DataCloud and offers the possibility to see groupings of objects, search for separate objects or to look up the routes made by users. A conceptually interesting aspect of the Full View is the constellation of the cloud. This can be changed by using a specific search term (keyword, title, name of the submitter). The entered information controls the organisation of the cloud. The objects have the closest match with the search term are displayed in the centre. The less relevant an object is to the search terms, the more it is placed away from the centre. The general characteristics can be retrieved in the first layer, the actual content can be seen in the next layer: the close-up view.



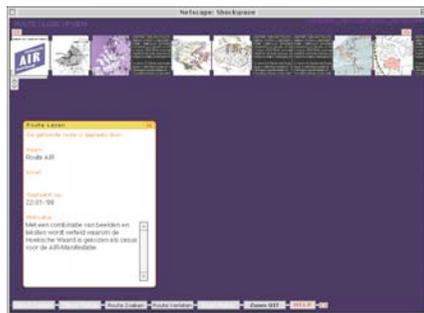
When the cloud is opened a browser window appears with the starting configuration of the DataCloud (a diffuse cloud of circle shaped media objects). From there it is possible to move back and forth between the two screens of the interface. A menu bar in the bottom of the screen contains several general functions to operate the DataCloud. The screen represents a 2D-space. A method of 'organisation' of objects is needed to visualise the proximity of objects (dependant on the similarity) in the imaginary multidimensional space on the screen. Two ways are placed in the cloud to be able to do this:



1- The first method is computational and uses a comparison of the characteristics of the objects. When two M0's show a strong similarity their mutual distance is interpreted as small, when they show little similarity the mutual distance is large.

In the interface the distance between two M0's therefore varies between zero and maximum. This distance is the radius of an imaginary circle with the 'reference object' as centre. The other M0 is placed on the circle under a random angle.

2- The second method is relational and is based on the users' ability to show relationships between objects with a so called 'route'. Objects can show similarities or relationships that can not be calculated by a computer program, for example when the objects together form a 'story' or another sequence. In a route they can be mutually connected.



<zoom box>

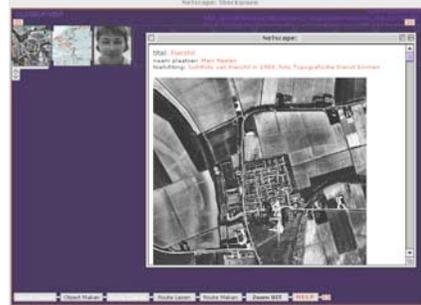
A framework can be seen in the window, the 'zoom box'. In the zoom box the objects are shown enlarged; the zoom box is actually the reproduction of the second (zoomed in) layer. Dragging the zoom box away will enlarge the objects in the DataCloud. A 'rollover' on top off an enlarged object shows the title (and possibly the title of the current active route, when the object is part of that). A click on the mouse opens the characteristics of this object (title, name, contributor, date, keywords). The DataCloud can be reconfigured based on the characteristics by a selection from this list.

In the zoom box also contains a 'zoom in' button. This button has the same function as the 'zoom in' button in the menu bar. The cut-out of the zoom box is blown up to fill the whole screen: you change to the second screen.

<close-up view>

The second screen doesn't only show the general characteristics of objects, but it also shows the reactions of the users on the specific object, what routes the object is part of, and what kind of object it is (text, image, sound).

Every M0 in the close-up view consists of a centre surrounded by three 'satellites'. These represent the 'keywords' and 'reactions' that belong to the M0 and the 'routes' the M0 is part of. In this second screen it is also possible to open the entire object. The contents will then be visible/ audible in a separate window. All opened M0's are saved in the 'history bar', visible in the top of the screen. It is then possible to create a new route by using the collections of M0's in the history bar. The order of the M0's within a route can be changed and at the same time M0's can be removed from the history bar when these are not desired in a new route.



By using navigation crosshairs, in the middle of the screen, one can navigate through the Data Cloud in the close-up view. This makes it possible to travel from object to object or to follow a route in close-up.

Many special functions of the cloud (adding objects yourself, making routes, etc.) can be reached via the menu bar or via specific contextual menus. The intention is that the functions can be reached as intuitively as possible.

credits

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DWHW, TECHNIQUE

The user interface is based on Shockwave. Macromedia Director 6.5 was used as development platform for this. Users must have the required plug-in to be able to use the cloud.

Opening the DataCloud application will begin the downloading of database content and a 'cloud-background'. This cloud is a GIF89-file that is generated based on the data configuration. This is the two-dimensional representation of the data in the DataCloud. The database contents are placed in TAB-delimited text file. For each object this file contains: the co-ordinates, ID-number, the filename of the cloud-background, the possible sequence number of the object in the current route, the title and the name of the contributor. For each M0 an object is created that will contain 'his' characteristics and 'knows' how to behave in the full view, as well as close-up view. After that a TAB-delimited text file with the information of the available routes will be downloaded. These steps are taken for every reconfiguration of the DataCloud. The lists with keywords, routes and reaction of every individual M0 are downloaded after an action of the user. This information is saved locally in a cache until the application is closed. The reaction and keyword data however will be downloaded again when this is changed per object.

Database: The database is MySQL, a freely available multi-platform database, largely compatible with the SQL-standard. In its current form MySQL runs on a SuSe-Linux, version 6.0

Data processing: The data processing takes place in the UI, as well as server-side. In the UI that is done by 'Lingo', on the server-side Perl 5.0 is used.

Receiving and storing data in the database is handled by Perl-scripts. These scripts also process the information in the creating of the DataCloud-configuration and the invoking of 'Convert': and 'ImageMagick'. Those last two applications generate image files based on parameters and command line functions.

Communication database-interface: The exchange of data between the database and the UI is done through a number of steps. Shockwave can import data directly from a random internet-host. In this case in text-format and in GIF88-format.

Retrieving and placing the media objects takes place in a browser window that is opened by the UI, by using Javascript (Netscape) and VBScript (Internet Explorer). The URL contains the command and parameters for the CGI-scripts to down- or upload the relevant objects.

Placing a media-object also takes place in an external browser window. The form that must be filled in is a combination of HTML form-elements and Javascript.

Analogue to this the 'reactions' associated with an object are opened and placed and the 'keywords' are placed. The placing of a 'route' differs slightly from these methods. From the UI the necessary route-information is directly sent as a parameter.