MaTriX
Mask Transformation Toolbox

MaTriX is our tool for the modernisation of proprietary, antiquated user interfaces which, for example, are based on IFG, SCREEN COBOL or CICS. MaTriX automatically replaces these masks by contemporary, standardised technologies.

Motivation

Even today mainframe masks still have the charm of the 1970s and 1980s:

- The mask window is often limited to 80 x 25 characters.
- Function keys play an important role in navigating forward and backward and alternatives are selected by the ticking input fields.
- Entries cannot be checked until after sending the mask, reaction during an entry is not possible.
- Modern GUI design features such as menus, links, combo boxes etc. do not exist.
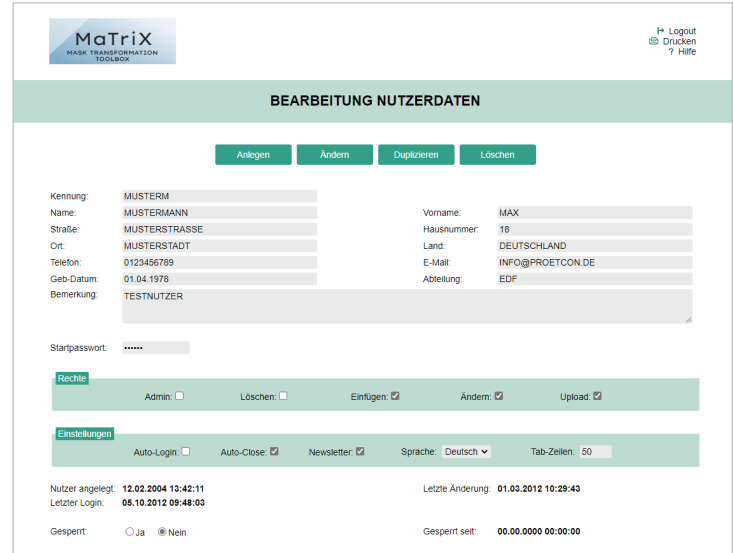
Features

- **MaTriX uses modern web technologies.** Modern technologies such as HTML5, Ajax and common JavaScript frameworks are used to develop Web 2.0-based interfaces.
- **The client display is browser-based.** In this way, no software needs to be installed on the clients which is a major contributing factor for saving costs. In addition, a large number of possible client architectures (PC with Windows or Linux, Mac, Android systems, …) are supported by this.
- **MaTriX includes a WYSIWYG mask editor.** Using this, new interfaces are intuitively and comfortably developed according to the WYSIWYG principle. Extensive elements are provided for designing the masks. These are amongst others:
    o elements for text display and text input,
    o buttons, radio buttons, checkboxes, combo boxes,
    o grids for the positioning of elements and
    o specific tables for the display of message data with amongst others sort, search and scroll function.
  The editor is designed as a web application; local installation on the client is therefore not required.
- **MaTriX allows automated migration of mainframe masks.** If mask descriptions are available in an automatically processable form, these can be transferred automatically to the new technology using the mask migration tool integrated into MaTriX.

Automated Mask Modernisation

Migration of screen masks of the legacy system with MaTriX is carried out largely automatically which, in general, significantly reduces project costs and duration as against a manual conversion.
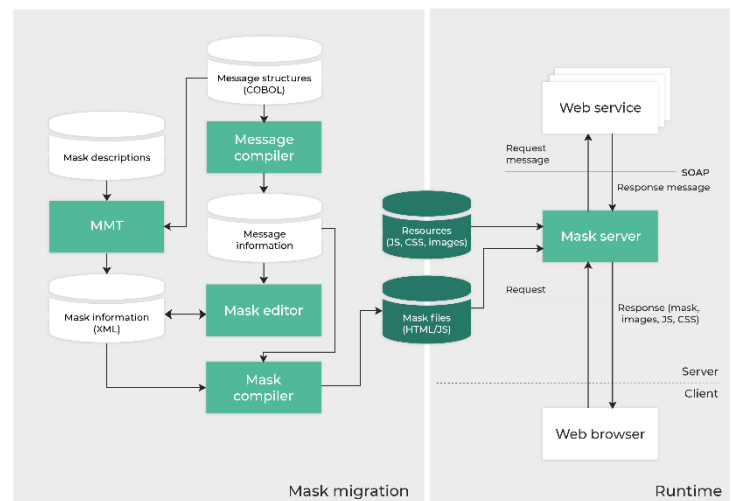
- Starting point are the original mask descriptions (e.g. IFG, SCREEN COBOL) as well as the message structures that define the interface between the server programs created in COBOL and the masks. The precondition for this is that the mask descriptions are available in a readable, meaning automatically processible form.
- During conversion, the masks are not implemented 1:1. Several modifications/optimisations are carried out such as, amongst other things, the customer-specific CI is "pulled on" straightaway during the migration.

MaTriX Technology

- **MESSAGE COMPILER:** During migration, the message structures are separated from the COBOL programs. The message compiler analyses these messages and stores the information gained thus (field name, field type, nesting of fields, ...) in structured form (message information).
- **MASK MIGRATION TOOL (MMT):** The MMT converts the mask descriptions and saves them for further processing in XML format.
- **MASK EDITOR:** The mask editor is intended for the creation of new screen masks and for the visual and functional revision of converted screen masks. These are stored in XML format.
- **MASK COMPILER:** The mask compiler translates these XML files into JavaScript (mask files).
- **MASK SERVER:** The mask server establishes the connection between web browser and web service during runtime. It makes the generated mask files as well as other fixed resources (images, CSS files, fixed JavaScript libraries, HTML files, ...) available to the client.

Please contact us!

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