Magento - an introduction and integration with TYPO3

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Agenda

1. Introduction of Magento

2. The integration scenario

3. The integration solution

4. An evaluation of the solution

What is Magento?

- Open Source E-Commerce system
    - produced by American e-commerce specialist Varien Inc.
    - final version 1.0 published March 31st, 2008
    - current version 1.1.6 with additional functionality

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- broad positive response

  - Zend Enterprise PHP Management News

  - Jack Aboutboul, Red Hat

  - ecommerce-guide.com

What is Magento?

- Some of Magento's out-of-the-box functionalities
  - five different types of products: simple, configurable, virtual, grouped & bundle products
  - good marketing functionality
    - up-/cross-selling
    - newsletter-generation
    - huge pricing possibilities
  - good analytics and reporting functionalities
  - search engine-optimized
  - internationalization support
  - multi-shop functionality

Magento's pros

- high functionality

- modern architecture

- high flexibility, extensibility, maintainability

- well-defined interfaces

- highly scalable

Magento's cons

- high complexity

- inadequate documentation

- high requirements on server hardware

- still some minor bugs or missing functionalities

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The scenario

- existing TYPO3 website

  - has login functionality for website users

  - users already registered

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    - has login functionality for website users

    - users already registered

- customer wants to integrate e-commerce shop into existing site

    - mini cart on regular pages

    - product teasers in infoboxes

    - whole workflow integrated

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Live Presentation

The integration

- Magento offers a Web Services API

  - interfaces for catalogue, customer and order data

  - perfect to integrate Magento with ERP or CRM systems

  - some drawbacks:

    - no possibility to add new orders

    - menus and other elements would have to be synchronized between systems

    - performance & security issues

    - different templating systems - doubled templating efforts

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- Magento API no real option

Our solution - the frontend

- TYPO3 starts Magento via PHP in FE plugin

  - Magento offers two modes

    - run-mode executes full application and renders everything

    - app-mode only initiates framework ➔ good basis for an integration

  - TYPO3 passes configuration information to control the application

  - switched some major classes of Magento

    - aim: adapt dispatch process to control the application flow

    - development principles:

      - change as few as possible

      - assure upgradability of Magento

      - Magento still runnable as stand-alone application

Our solution - the frontend

- some problems

  - gathering output

    - how to gather the wanted content?

    - solution: tell Layout-classes to remind their output instead of putting it out

  - link generation

    - how to generate TYPO3 style links in Magento?

    - solution: pass a cObject to Magento and let it render all the links

  - configure outputs

    - how to translate TYPO3 style piVars to Magento parameters?

    - solution: create a TYPO3 router that knows how to handle piVars arrays

Our solution - the frontend

- some problems

  - user synchronization

    - how to make both systems use the same users information?

    - solution: implement a Magento user model that executes database changes in TYPO3

  - session synchronization

    - how to implement a single sign on for both systems?

    - solution: implement observer objects for logging in and logging out

  - AJAX calls

    - how to keep Magento's AJAX calls working?

    - solution: avoid TYPO3 outputs when requests bases on JSON instead of HTML

Our solution - additional functionality

- menu generation

  - possibility to integrate Magento menus into TYPO3 menus

  - based on HMENU with user function

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- TYPO3 backend integration

  - best possible interface for editors

    - bases on TYPO3 flexforms

    - reads categories & products from Magento API

  - additionally possibilities to insert plugins via TypoScript

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Our solution - evaluation

- solution to the given scenario

    - integrated whole workflow

    - integrated desired contents

    - synchronized users and sessions

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- still problems ahead

  - need some work to implement backend interfaces for all desired views

  - solution for Magento-side caching of content links

  - more configuration possibilities in Magento Backend

Thanks for your attention

Please don't hesitate to ask questions!

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