FoundIS

Publishing and Information Web System

General Characteristics

The FoundIS system is a web-based tool integrating functionality and features of a content management system and general information system. All interfaces, commands, and functions of the FoundIS system are provided as web applications, which means that they are accessible via the Internet and no additional specialized software is needed for running the system – a standard web browser is sufficient for using all the functions of the FoundIS system.

Is the FoundIS a right tool for your organization?

The FoundIS is especially dedicated for non-profit organizations (foundations, grant agencies, interest groups) as well as for private profit-making companies characterised with some of the following characteristics:

- Intensive communication with your customers or partners, where a significant part of information is of multimedial and interactive character and it is provided via your web site (possibly interconnected to an information system).
- Requirement for on-line preview, monitoring and analysis of budgets of planned and running projects.
- Multi-lingual environment, a need of publishing information and documents in several languages. Requirement of keeping a consistency between different language versions (a change in a document in one language has to be reflected in corresponding changes of this document in other languages).
- Several levels, or groups, of users and user roles (e.g. program coordinator, project manager, project partner, administrator, etc.). Different rights and levels of access to the published information or documents for different groups of users (e.g. read-only, read-modify, read-delete, read-write, etc.).
- The use of a full power of your web site for communication with your partners. It implies a necessity to have the design and content of the web site under your control – by a tool, where no special knowledge of web programming and design is required.
- The published information has to be accessible also for the disabled. The FoundIS meets requirements of the Web Accessibility Inititative – WAI (see also on http://www.w3.org/WAI/).

FoundIS Functionality

FoundIS consists of two, relatively independent, modules:

1. **Web publishing web system:** management of structure and content of the site; definition and control of dynamic objects, textual and multimedial information. This module provides an effective and easy-to-use way for definition and maintenance of the web site structure and for publishing various mutimedial information (texts, audio, graphics, animations) of static or dynamic (e.g. discussions, calendar of events, etc.) nature.

2. **Information system:** tools for management of information and documents for your communication and cooperation with customers and partners (e.g. management of projects, programs, contacts, finance, etc.). By this module, a defined part of your information system can be accessible also to your customers and partners. You can share with them a defined part of information and published files and thus make your mutual cooperation on projects more efficient. Of course, the FoundIS system ensures high level of security for shared information, by authorization and authentication of users together with possibility to define specialized user groups and roles with proper access rights.

User Functions

1. Web Publishing System:

- **Creation and Management of the Web Site**

Web-based publishing and administration interface is user friendly, intuitive, simple and easy to use. No special knowledge or specialized software is needed, all the functionality is available via a standard web browser and its basic functions. This interface contains functions for publishing various textual and multimedial information, for modification of web structure and graphical design of the site. Dynamic objects as discussion forums, news, timed events, forms, and documents of any format can be placed on the web site.

- **Searching and Information Retrieval in FoundIS**

Emphasis is given on simple and quick access to all published information. From this point of view, the FoundIS system has several mechanisms, which helps users to find a relevant information as quickly and easily as possible.

The following mechanisms are implemented:

- Clear and easy-to-use web interface with hierarchical menu structure of the site.

- Navigation bar with full path from root to currently displayed document.

- A list of last modified documents and objects.

But the most important are searching capabilities. The system contains two complementary retrieval systems, which are functionally interconnected and can be combined:

1. <u>Fulltext search</u> with automatic indexation enables to find all documents and/or dynamic objects containing given word or a sequence of words. Advanced fulltext search enables to define a type of documents, a time scale of last modification and a style of displaying results.

2. <u>Conceptual search</u>, retrieval of information based on content similarities between published documents. For all the displayed documents, the system automatically retrieves "similar" documents and provides a set of links to them. It means that user has always a knowledge of informational context for any document published on the site. In addition, this is the way how published documents can be connected across the strict hierarchy of menu, according to similarities of content.

Integration of conceptual and full-text search is innovative, this method of information retrieval was successfully tested in several application domains. It makes the navigation and browsing in a large number of documents much easier and significantly increases quality of retrieval process.

2. Information System:

- **Publishing and sharing information with your customers and partners**
The system enables to publish, share, and use information on programmes, projects, approved projects and their budgets and on various activities of the organization. The information can be shared on several levels of access rights (read-only, read-write, read-modify, etc.) and by several user groups (e.g. employees, managers, the public, partners, etc.).

- **Retrieval and sorting of projects**

To access the right information at the right time, it is possible to search, sort, and filter projects (or programs, grants, financial budgets, etc.) using various criteria, e.g. by the date, time of last change, by budget, a defined category or by any word (fulltext search).

- **Functions of administrative, contact and financial management**

The system contains a set of functions of financial management, e.g. graphical statistical outputs of characteristics of projects, semi-automatic creation of letters and any official documents from predefined forms, records and management of contacts of sponsors, partners, customers, employees, etc.

- **Security of the system**

  High security level of published data and information is ensured by powerful security system based on user roles. Backup of all system data, log of all changes and activities, and monitoring of system functions are also a part of the security architecture of the FoundIS system.

3. User Interface

- User interface of the FoundIS meets the requirements of general accessibility of web services as defined by the W3C consortium (http://www.w3c.org).
- The FoundIS system fully supports multilinguality on the level of the information system as well as on the level of the web publishing system. The UTF-8 format is used for character encoding, so texts in any languages can be published and displayed correctly.

Technical Requirements

Platform

The system uses the following SW platforms and components:

- OS Linux or MS Windows – FoundIS is platform-independent.
- Apache Web server with Jakarta Tomcat JSP extensions.
- mySql DB for storing the system data (mySql can be replaced by any JDBC-compliant DB, if needed).
- Java classes and components for the core of the system.
- JSP server-side scripts for the user interface.
- HTML and CSS for static content of web pages.

Software Requirements

No special softvare is needed for running FoundIS system. Full functionality of the system is available via a standard web browser, e.g. MS IE (version 5.5 or higher), Netscape/Mozilla (version 1.3 beta or higher) etc.

Hardware Requirements

A standard Internet connection (recommended speed 128 kb/s or more) is sufficient for the full system functionality.

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Detail Description of FoundIS Functions

1. Information System

The FoundIS Information System provides a set of tools for management of information on programs and projects with different status (e.g. accepted, running, waiting for decision, rejected, closed, etc.). It contains tools for registering contacts and for financial management. All these tools are integrated and functionally connected. In addition, there is a calendar of important events and internal discussion space for people participating in the projects. Web interface of the Information System is presented in Figure 1.
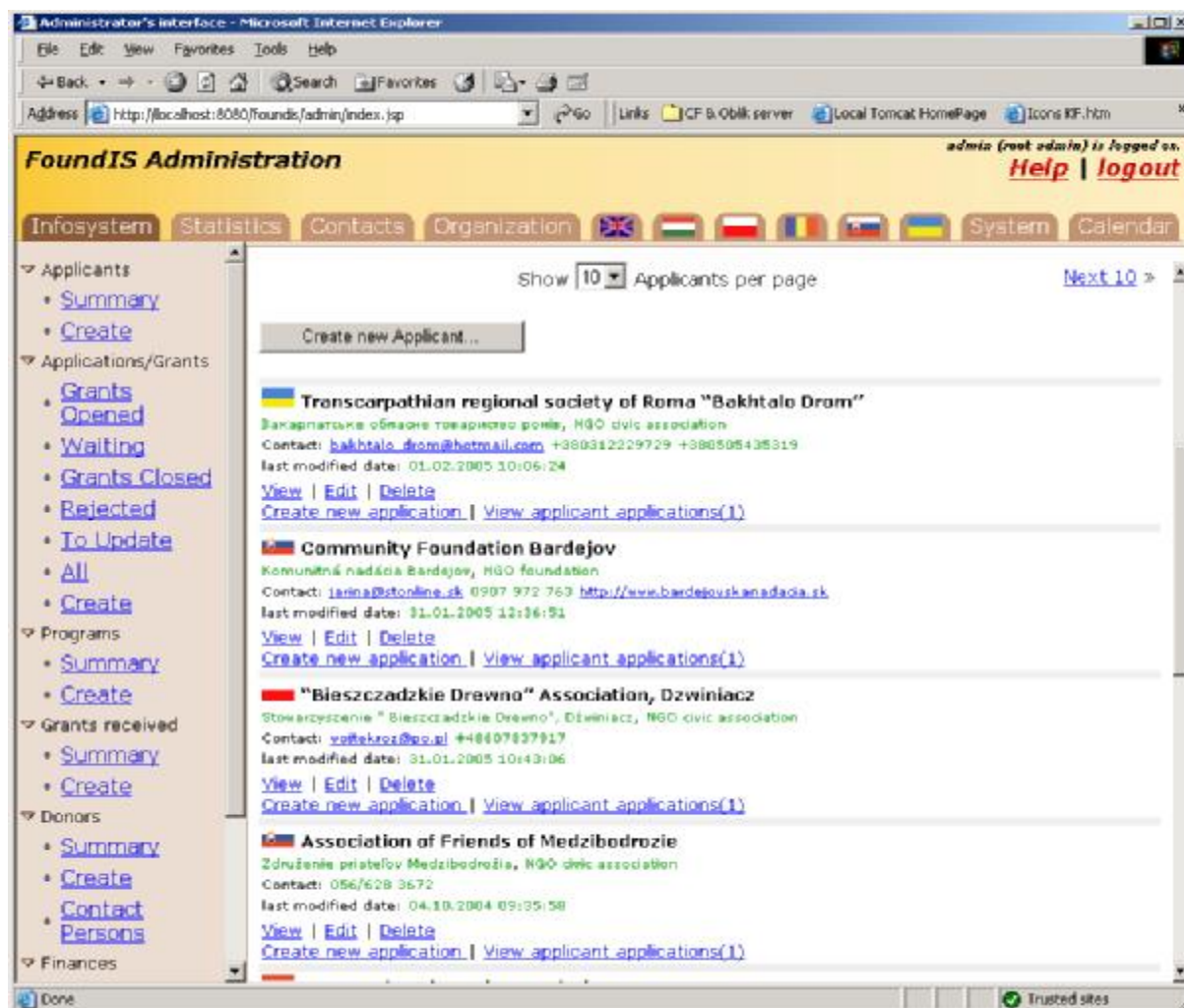

Figure 1. Web interface of the Information System: A list of applicants – organizations applying for projects or grants.

Contact Management

a) Applicants of projects / grants
-   Register of all organizations/organisational units, which are applying for projects or grants (successfully or not).
-   Register of all contact persons for an organization, especially persons responsible for the project and its budget. An optional format of address and other contact data available.
-   Searching and sorting of applicants and contacts by all its properties. Pre-defined filters by most frequently used properties: name and type of organization, program, etc. Possibility to define new and modify the existing filters.

- Connection to other parts of the system, especially to the project register and financial management. An overview and possibility to edit all the projects running or waiting for decision, its properties, budgets, etc.
- Security and access right settings against misusing of the data. Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

b) Sponsors/Donors
   - Register of all donor organizations which are providing finances for programs and projects.
   - Register of all contact persons for a donor organization. Optional format of address and other contact data.
   - Searching and sorting of donor organizations and its contact persons by all stored properties.
   - Connection to other parts of the system, especially to financial management. Survey and possibility to edit all payments given by particular donor organization for projects, programs, administration purposes, operational costs, etc.
   - Security and access right settings against misusing of data. Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

c) Partners
   - Register, searching and sorting of all partner organizations and its contact persons. Optional format of address and other contact data.
   - Security and access right settings against misusing of data. Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

d) Employees, Users
   - Full contact data of home organization and its branch offices. An optional format, possibility to edit and update the contact data.
   - Personal agenda of the organization, a register of employees and their contact data. Settings of access rights and competences for particular programs or projects. Optional format of address and other contact data.
   - Management of user groups and access rights for these groups and/or users: login, password, right to perform certain action (yes/no), accessibility of certain data (not accessible / read only / full access).
   - Searching and sorting of employees and users by all the properties, including access rights.
   - Connection to other parts of the system, especially to the register of projects. An overview and possibility to edit the list of employees responsible for particular project or program.
   - Security and access right settings against misusing of data. Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

Register of Projects / Grants

a) Listing, searching and sorting of all projects (closed, running, waiting for decision, rejected etc.).

b) Searching and sorting of the projects by all its properties, e.g. by state of processing, by program it belongs to, by amount of allocated (granted) money, by geographical location, etc.

c) Pre-defined filters by most frequently used properties: state of processing and program. Possibility to define new and modify the existing filters.

d) Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

e) Connection to other parts of the system, containing related information: applicant of the project, corresponding program, related forms and documents, financial budget and cashflow of the project.

f) Security and access right settings for users or user groups on particular project: not accessible / read only / certain functions only / full access.

g) Output of printed documents for a particular project by pre-defined templates (in HTML or RTF format), e.g. documents as Recommendation for project (by a board/grant committee), Letter of acceptance, Registration letter, etc. Possibility to create new templates for another document types.

Programs[1]

a) Listing of programs, connection to other parts of the system: list of projects applied within this program, a register of revenues received from donors to this program.

b) Searching and sorting of the programs by all its properties.

c) Creation and modification of programs.

d) Tools for registering revenues from donors to the program and from the program to projects, according to the payment calendar. An overview of current financial state for programs and projects, statistical graphs and outputs of history of revenues/payments.

e) Archive of electronic documents related to a program: contracts, letters, offers, etc.

f) Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

Incomes Register

a) Register of financial revenues from donors, together with records of its usage: payments to programs, to administration costs, to operational costs, etc.

b) Survey of current financial state as well as of history of cashflow. Searching and sorting by all properties. Graphical and textual outputs of statistical surveys.

c) Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

Financial Management

a) Register of financial revenues and expenses, searching by all parameters: amount of money, way of its use, grantee, donor, date, time, etc.

b) Predefined forms for payments from donors by type and way of use.

c) Security and access right settings for users or user groups. Logging of all changes in all records, including date, time, description of change, and name / login of person who made the modification.

Calendar and Internal Discussion Space

a) Overview of timed events in the home organization and its branch offices.

b) Possibility to create and modify timed events, addressed to particular branches, user groups, or users. Types of events: public event is published on the web site automatically, internal event is hidden and is visible only to a selected group of users in the discussion space.

c) Searching of events by all its properties; calendar view of events.

d) Internal discussion space with web-based interface. Connection with user groups and with the contact data of all the users – employees (email, address, etc.).

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[1] Program consists of a set of projects targeting an overall program goals.

2. Web Site and Publishing

Customizable graphical solution of the user interface enables to create and maintain an attractive web site with interesting and up-to-date content. Emphasis is given on clear logical structure of the site, simple navigation and quick search of information. Site contains several dynamic elements, which enriches the content and enables to use the site as an efficient communication tool with customers and partners of your organization.

Figure 2. English version of the web page for a fictious organisation (in this case a foundation).

Navigation

In basic version, the web site has following navigation elements:

1. Hierarchically structured menu;

2. Display of a full path of current page in the hierarchical menu structure. It enables to return quickly to upper levels, and makes the navigation easier;

3. Static navigation bar with links to the most frequent pages as Contact, FAQ, Calendar, Last changes, Site map, etc.;

4. Searching bar – links to simple and advanced search;

5. Related information. A list of pages (documents, objects) with similar content can be defined for each page in the site. This list of links supports enhanced navigation capabilities and is also used as a part of searching (Conceptual searching).

6. News, events, last changes. A list of the recent and probably the most important information items should be placed at well visible place and should be located very quickly and easily. So the list of news is usually placed on the home page of the site.

Objects

Following dynamic and interactive objects can be inserted into the site:

1. Pages in hierarchical structure of menu. The hierarchy as well as text of all the pages can be modified and updated any time.

2. Pictures can be placet directly into the text of pages, or can be published as foto-gallery.

3. Mutlimedia files of any format (e.g. MS Word, MS Excel, PDF, ZIP, AVI, MP3, etc.).

4. Textual HTML documents, which are not included into the menu hierarchy. They can be contextually related to several menu items, so they are accessible by the *Related information* link.

5. Data from Information System: list of programs, list of running projects, HTML or RTF forms and documents for a project, etc.

6. Discussions with moderated or non-moderated content.

7. News, recent information items, displayed on the home page as a list sorted by creation date.

8. Timed events with a starting and closing date are displayed as a sorted list or in a calendar view.
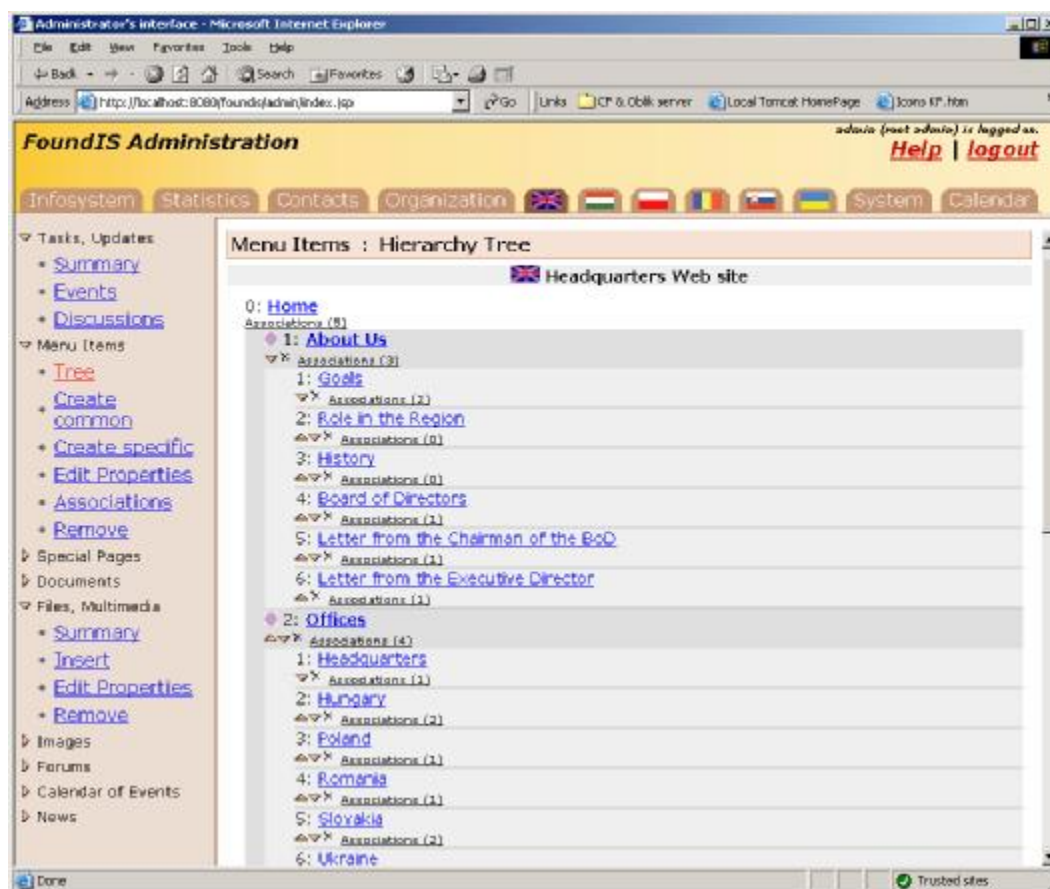

Figure 3. Administration interface for web site management. Hierarchical menu structure.

Language versions, check of consistency

Consistency of all the language versions of the site is checked automatically in the FoundIS system. It is possible to have dozens of language versions, where one of them has to be the primary language (usually it is English language). The primary language version determines which part of the site is common for all language versions and which part can be modified independently. The common part is then copied to all other language versions and the texts should be translated (manually or using some third party translation tools) correctly to these languages. People responsible for maintenance and translation of particular language versions are automatically noticed on the changes made in the common part in the primary language version. These changes should be reflected in all other language versions and should be translated correctly. This is the way how the content of the web site in all languages will be kept consistent and up-to-date.

Administration

Administration interface (Figure 3) provides functions for management and manipulation of all the objects in the web site. It is possible to fully modify structure of the hierarchical menu and content of all the pages via this interface, using a standard web browser. Also dynamic objects as pictures, discussions, news, events, and multimedia files can be published and edited via this administration interface. Consistency of language versions is the native feature of the interface for all the published pages.

Administration access is safe due to authentication and authorization process, where correct login and password is required. The implemented mechanism of user groups enables to restrict access of a given user (user group) to certain functions or to certain parts of the site only.

Besides functions on management of the Information system and web site management, the administration interface provides some functions for setting global parameters such as visit counter, indexing and searching, logs, statistics, and others.

Possible Extensions

We offer the following tools / modules as an extension of the basic version of the FoundIS system:

Document Flow. Complex control of processes in the organization: creation, routing, tracing, updating, and archiving documents by current state of a process. Customisable user interface for employees corresponding to their position and their responsibility in the document flow.

Archiving Tool. Tools for storing and management of documentation of older projects / grants. Safe storage of all data, quick and effective retrieval, various statistical outputs.

Cash Flow. Tools for connection of financial management with internal accountancy of the organization.

Statistics. A set of tools for detail evaluation of particular projects and programs according to various optional criteria: geographical location, type, thematic focus, budget, date, etc. Outputs available in textual or graphical format can be used for further processing (export to several DB formats).

Knowledge management. Contextual extension of processed data using techniques of artificial intelligence. Creation of a conceptual model of the organization, its connection with stored documents and information. Intelligent information retrieval using mutual conceptual relationships stored in the model, efficient navigation in possibly a very large space of data and documents using conceptual similarities.

Development of another specialized software tools is possible upon individual request.