Technical Profile

technical introduction to the architecture of the weblicon Organizer

Client Architecture

The weblicon Organizer supports a Multi-Client architecture, which enables the end user to access the central data maintenance via the server architecture. Thanks to the modular architecture, new clients, as for instance an i-Mode- or a J2ME client, can be developed effectively and efficiently.

1. HTML-Client

The HTML-Client permits access via any Web browser from any PC with an Internet connection, regardless of the operating system or the applied browser version. The HTML-Client offers an uncomplicated and elegant user surface, which distinguishes itself clearly from competitive products. By using HTML 3.2 or the conscious avoidance of problematic Internet technologies, such as JavaScript or Cascading Style Sheets (CSS), the HTML-Client achieves a high degree of compatibility with the various browser types.

2. WAP-Client

The WAP-Client enables the end user to access the same central terminal and address information via a WAP-enabled cell phone as those processable with the HTML-Client. An uncomplicated user surface permits the cell phone user to read, edit and delete appointments and addresses. The WAP-Client thus offers fully-fledged access to the information of the weblicon Organizer. By using WML 1.1, a high degree of compatibility with the most commonly used cell phones is guaranteed.

3. Java-Client

The Java-Client may either be integrated into an HTML page using an applet or be used as a stand-alone application, comparable with a normal desktop application. The program communicates with the centrally installed server applications via http requests and thus calls up appointments and addresses from the central database. The presentation and the ease of operation of the Java-Client corresponds with that of today's desktop applications, comprising direct manipulation, drag-and-drop, undo and double clicks. The Java-Client is a unique feature of the weblicon Organizer and underlines the claim to technological leadership.

4. SyncML Support

Weblicon has developed a faceless server application which will serve as a synchronization server for the different synchronization clients. The server application and the clients will communicate using the SyncML protocol using HTTP for transport. The server application acts as a gateway to the centrally stored contact- and calendar data providing read and write access for different SyncML clients using a single protocol. Using SyncML, the user will be able to synchronize with:

- Microsoft Outlook

Weblicon has implemented a native Windows application for synchronizing the weblicon PIM with the popular Microsoft Outlook desktop PIM. The weblicon Outlook Sync application will be downloaded and installed on the users PC. Users can start the sync application which will then communicate via SyncML to the weblicon synchronization server:

- Palm PDA

weblicon has developed a conduit for the freely available HotSync application which will communicate via SyncML to the weblicon synchronization server. Since the HotSync application also supports synchronization with Microsoft Outlook and other PIMs, users will automatically be able to sync their weblicon schedule and address information with Outlook, too. Since the HotSync application is an open platform, many 3rd party developers of PIM applications are developing conduits to support synchronization with Palm OS devices via the HotSync synchronization application. By providing a HotSync conduit which sync with the weblicon PIM, all 3rd party PIM applications supporting HotSync will also be synchronized with the weblicon PIM. Examples of 3rd party applications which will be synchronized with the weblicon PIM via the HotSync application are: Lotus Notes, Symantec Act!, Netscape Communicator, MeetingMaker, Now-up-to-date and Schedule+.

- Pocket PC

Synchronization with Pocket PC (Windows CE) devices will be provided by supporting the freely available Microsoft ActiveSync technology. Weblicon plans to implement an ActiveSync session provider which will use the SyncML protocol to talk to the weblicon SyncML server. ActiveSync also synchronizes with Microsoft Outlook and Schedule+ which will result in synchronization between the weblicon PIM and Outlook. Since the ActiveSync application is an open architecture comparable to HotSync, all 3rd party PIM applications which support synchronization with ActiveSync will also synchronize with the weblicon PIM.

- Smart Phones

Having chosen to implement SyncML from the start as the protocol for communication between the weblicon clients and server brings immediate compatibility with future SmartPhones supporting SyncML. The high-end Nokia Communicator and the forthcoming mass-market 6310 model will include a SyncML client preinstalled for synchronizing with any SyncML server. Having SyncML support as one of the first PIM technology providers should increase attractiveness for telecommunication companies.

Central Server Architecture

1. WebObjects Application Server

The weblicon Organizer is based on the "WebObjects" application server, one of the most mature and most powerful application servers on the market. WebObjects offers an excellent abstraction to the databases used as well as a high scalability. This application server is the heart of some Internet e-commerce applications critical to companies such as the Apple Company Store and offers of the Deutsche Bank. The WebObjects application server is more or less independent of the server operating system used and supports HP/UX, SUN Solaris, MacOS X Server and Windows NT/2000.

2. Independence from Databases

WebObjects offers Enterprise Objects Framework (EOF) with a very good abstraction to the databases used and enables total independence from databases. This is accomplished with the help of a database-adapter architecture responsible for generating the SQL-requests. Within the Organizer application, an abstract request logic is used, which is independent of SQL and which allows object-oriented access to the relational database. There are adaptors for Oracle, Sybase, Informix, OpenBase, Frontbase and any ODBC-databases.

3. Multi-Tier Architecture

The weblicon Organizer is based on a Multi-Tier Architecture, and thus enables a theoretically unlimited scalability of the entire system. In case of the Multi-Tier Architecture, the clients (eg HTML browser) communicate through an HTTP-server layer with the application-server layer, which in turn communicates with several database servers. At the level of HTTP-servers, usually a Round-Robin DNS-server is used for distributing the load. At the level of the application-server, the "WebObjects" application server used by the weblicon Organizer distributes the load by means of a Round-Robin or load-based distribution among several instances of the application, which in turn may be distributed among a number of application severs. The respective instances of the application communicate with various database servers (eg with an Oracle 8i RDBMS for storing appointments and tasks or an LDAPv3 server for storing the user data and address books).

Java programming language

The weblicon Organizer has been developed completely in the Java programming language, which guarantees a high stability and more or less independence from the platform of the server implementation. As Java has meanwhile matured into an industrial standard, there are a great number of additional licensable libraries available, enabling a simple integration of an SMSC service via SMPP, for instance. The Java language concept guarantees an extremely high stability and thus a good failure security of the entire system. By using the modern Just-In-Time-Compilers (as for instance the SUN HotSpot technology in JDK 1.3) a performance comparable to C++ is achievable.

Weblicon Technologies AG Weblicon was founded in Berlin in 2000. The company develops web-based applications for portals, service providers and telecommunication companies. The business model of the company is based on user-related licensing of the software to companies who offer this service to their final customers. Weblicon, set up by 13 software developers, operates as a pure supplier of technology and steps behind the brand of the licensee. The online Organizer software may be integrated seamlessly into existing networks of servers, applications and databases. For further information please visit www.weblicon.net