

White Paper - FeedReader RSS Platform

Contents

- 1. Summary..... 2
- 2. Newsbrain engine..... 3
 - 2.1. Functions of Newsbrain engine 3
 - 2.2. Development environment 4
 - 2.3. Operating systems support 4
 - 2.4. Database back-ends 4
 - 2.5. Scalability..... 4
 - 2.6. Unicode 4
 - 2.7. Multiuser support..... 4
- 3. Applications using Newsbrain 5
 - 3.1. FeedReader 5
 - 3.2. FeedReader OEM 5
 - 3.3. FeedReader Connect Personal 6
 - 3.4. FeedReader Connect Server..... 6
 - 3.4.1. FeedReader Administrator..... 6
 - 3.4.2. Webpage Downloader..... 6
 - 3.4.3. Article Indexer 7

1. Summary

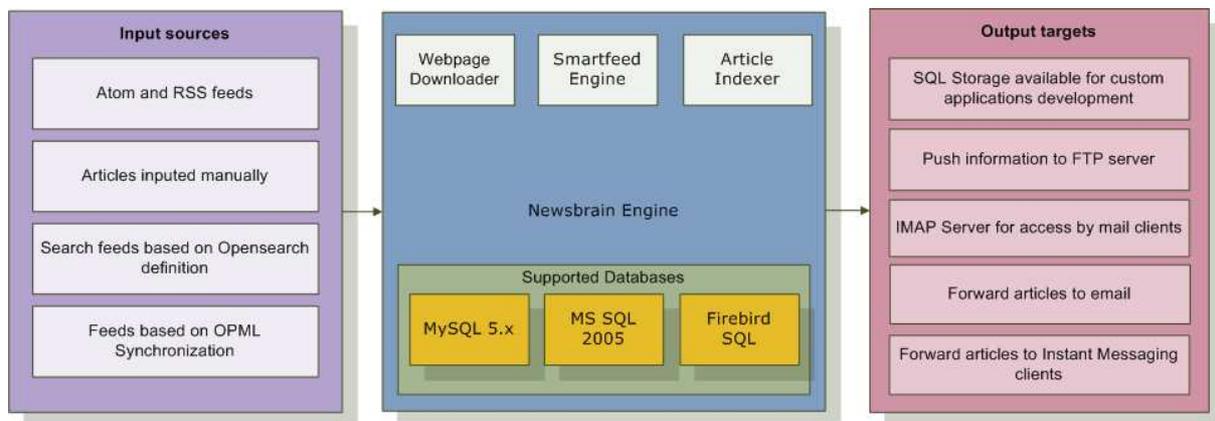
In this document we will give an overview about Feedreader product portfolio and describe functions and architecture of Newsbrain engine – central module for all products in our portfolio.

Potential reader of this document is technical representative of a company who'd like to develop special application that uses RSS technologies and does not want to invent everything what comes to RSS technologies from ground. It's also a good read for everybody who'd like to know the technical side of our business.

2. Newsbrain engine

When we started development of FeedReader version 3 we had specific requirements according to what we wanted to use developed RSS technologies in multiple products.

Only solution for this was to separate RSS technologies from user interface. This led to creating special Newsbrain engine – special module that contains all functions that are needed for working with RSS technologies. Newsbrain engine became central module that is used by all end-user applications. Newsbrain engine can be used in applications with user interface or in system services running without user interface.



Newsbrain engine is not only meant for working with standard news-feeds. It's also possible to use it for every kind of information transport and analysis like traffic information, process monitoring in factories or sales and support in corporations.

The fact that all technical aspects of RSS related technologies are contained in Newsbrain engine makes it easy and fast to develop various applications that use RSS technologies because there is no need to invent and build this logic all over again.

For example creating simple RSS reader that uses Newsbrain for all RSS related activities takes 15 minutes to produce.

Following paragraphs describe architecture of Newsbrain.

2.1. Functions of Newsbrain engine

Newsbrain engine can perform following functions:

- Storage of articles, feeds, tags, smartfeeds, folders, etc... in database.
- Update feeds and OPML subscriptions.
- Retrieve articles from database matching the defined smartfeed.
- Generating HTML output of article list for WebView and FeedReader Connect-s Web Uploader.
- Generating HTML output of single article for use in FeedReader and for FeedReader Connect-s Email Forwarder.
- Serving feeds, smartfeeds, articles through built in IMAP mail server.

- Sending instant messages to Microsoft Live Messenger matching the defined smartfeed.
- Download web pages from remote servers to local storage (caching).
- Retrieve „favicons“ from web pages
- Download feed enclosures (attachments like podcasts) from feeds

2.2. Development environment

Newsbrain engine is developed using Borland Delphi development environment (Borland Delphi 7 Professional). While using Borland Delphi we have tried to keep Newsbrain engine compatible with FreePascal compiler.

2.3. Operating systems support

Currently Windows operating systems including Windows Vista are supported. Portability has been kept in mind then developing Feedreader platform. This means that it's possible to port Newsbrain core and applications to Mac OS X or Linux using FreePascal compiler.

2.4. Database back-ends

Newsbrain core supports following databases as information storage:

- Firebird local SQL database
- Microsoft SQL 2005
- MySQL 5.x Community Server

Because Newsbrain core uses ADO (Abstract Database Objects) it's possible to add support for more different SQL servers including Oracle or PostgreSQL.

Used database engine is completely abstract to end-user applications. They do not need to know about what database engine is currently used by Newsbrain.

2.5. Scalability

One of unique features of Newsbrain is that it's scalable. Newsbrain can be used in simple applications that only subscribe to one feed. At the same time Newsbrain can be used in server applications that constantly monitor tens of thousands of feeds.

When Feedreader platform is used to track and monitor large number of feeds (tens of thousands) then distributing load between multiple servers will become an important factor. Currently it's possible to divide overall Feedreader Platform load to 3-4 servers. In future scalability will grow even further.

2.6. Unicode

Newsbrain engine is developed with Unicode support. This makes it possible to create applications in multiple languages (including Japanese, Chinese, Arabic and Hebrew).

2.7. Multiuser support

Newsbrain engine has partial multiuser support. We plan to add full support in near future.

3. Applications using Newsbrain

Below is list of modules and applications that form Feedreader Platform.

3.1. Feedreader

Feedreader is a free end-user application for reading RSS feeds. Feedreader is an oldest and original member of our portfolio. Feedreader development started on year 2000. It was first native Windows application for reading RSS feeds in the world and it set the logic how we consume RSS feeds. Over the years there have been multiple generations of Feedreaders. Latest generation is Feedreader 3.x that makes use of Newsbrain engine.

3.2. Feedreader OEM

Feedreader OEM is good choice for companies who want to offer their clients branded solution for reading company's RSS feeds.

Quite often our users underestimate the power of Feedreader OEM. We are talking mostly about Feedreader OEM as version that you could brand as your own RSS reader including your application name, colors, styles and other visual components. But there's additional functionality in Feedreader OEM that can be used in corporate environments. These are main advantages of using Feedreader OEM in corporate environment instead of standard Feedreader:

- Feedreader OEM contains OPML Synchronization. How it works? It's possible to define single (or multiple) (OPML formatted) feed repositories that contain selection of feeds. One repository can contain intranet feeds; another contains "world news" and so on. Users can subscribe to feed repositories and it's also possible to force subscription of feed repository centrally. When user has subscribed to feed repository everything will become simple. If new feed is added to central feed repository then every instance of Feedreader across the corporate network will also subscribe to this new feed. If feed is removed from central feed repository then it's automatically removed from all Feedreader applications.
- Preload feeds from predefined location on first run of Feedreader. This is simple sub-case of OPML Synchronization.
- Disable subscription of feeds by users. Combine it with OPML Synchronization and you limit users only to feeds that are preferred by company.
- In case of Feedreader OEM all settings are saved in registry, so it's easy to do initial configuration of Feedreader. You just define how Feedreader should function (should we play notification sound in case of new items, should Feedreader start minimized, should we show favorite icons next to feeds). It's also possible to disable changing of settings in Feedreader options case by case. For example you can disable changing of Proxy settings. And as all settings are loaded from registry you can create different policies for different user groups.

- Subscribe to feeds from UNC path. This feature lets users to subscribe to local files or network server locations (\\server\share\feedfile.xml). This means that you do not need web server. You can also use this feature if some local application creates files on local disk and you'd like to consume these files with Feedreader.
- Custom programming. If you want to have a feature in Feedreader that does not exist yet and at the same time it's critical to your business we are ready to add it. We are doing this all the time. In fact there are quite a lot of features in Feedreader that have started as some corporate customer's wishes.

Feedreader is quite popular in large corporations because of its simple user interface and existing powerful features. At least one Fortune 50 company is using our product as corporate communication tool. Feedreader is also branded by Geste (Groupement des Editeurs de Services en Ligne, <http://www.geste.fr>) as AlertInfo.

3.3. Feedreader Connect Personal

Feedreader Connect Personal is standard Feedreader with added communication functions. It's possible to define feeds or smartfeeds as information providers. Information can be pushed to Instant Messaging clients, email clients or web servers.

3.4. Feedreader Connect Server

Feedreader Connect Server is a version of Feedreader that runs on enterprise grade databases (currently on Microsoft SQL Server 2005, later on MySQL and Oracle databases) and provides user/developer with various methods of integrating feeds and articles with user's everyday information flow or 3rd party applications.

Example applications that use Feedreader Connect Server can be your own version of Technorati, Daylife or Google News. Throw in Feedreader Connect Server; add some simple web programming and you will have your own little Google News portal. No need to create feed and article store logic, feed updating algorithms and mess with erroneous feeds (our 8 years of knowledge tell that they are unavoidable).

Feedreader Connect Server also features IMAP Mail Server that makes it possible to read RSS articles using standard mail client applications (Outlook, Thunderbird).

There are multiple applications and add-ons that complement to Feedreader Connect Server:

3.4.1. Feedreader Administrator

Feedreader Connect Server is managed with Feedreader Administrator - application that makes it easy to manage Feedreader Connect Server settings. It's also meant for managing thousands of feeds and defining information providers (IMAP, FTP, IM and EMAIL).

3.4.2. Webpage Downloader

Webpage Downloader is Feedreader Connect Server add-on that downloads articles automatically from original web pages and saves them in local cache folder. This way it is guaranteed that information is available even if article is disappeared from original location. Webpage Downloader

does not download images from original location. Instead it modifies downloaded webpage in a way that all images are still visible in cached page by linking to images and styles in original location.

Downloaded webpages can be served from local web server. It's also possible to use 3rd party search applications for searching from downloaded webpages.

3.4.3. Article Indexer

Article indexer is Feedreader Connect Server add-on that indexes all articles and webpages in Google-like manner. This makes it possible to create advanced applications using indexed data analysis. Besides this Article Indexer makes searching from big databases faster.

Article Indexer can index 50000 articles in a day using single modestly configured server. Performance of Article Indexer depends on speed and performance of database server.

Article Indexer runs as a standalone application and could be situated in different server from Feedreader Connect Server. This means that it's possible to distribute load to multiple servers then monitoring tens of thousands of feeds.