

## Nissay Dowa Non-Life Insurance Co., Ltd., builds Policyholder Web Site using Xpiori XMS

Web CRM based on XMS results in large Reduction in Management Costs when compared to RDBMS system

**Company**  
Nissay Dowa Non-Life Insurance Co., Ltd.

**Industry**  
Insurance

**Web Site**  
[www.nissaydowa.co.jp/f-net/index.html](http://www.nissaydowa.co.jp/f-net/index.html)

**Background**  
Nissay Dowa wished to create a web CRM to increase customer access to insurance policy information.

**Challenge**  
The intranet had to be built quickly and have low overhead costs, yet be adaptable to allow it to be used for customer loyalty campaigns in the future.

**Solution**  
Xpiori® XMS did not lock Nissay Dowa into a database design and did not force data elements to be predefined. Nissay Dowa saved 30-50% over the cost of building and maintaining a CRM with RDBMS.

### Why XMS?

- Highly flexible data manipulation and management
- Easily handles heterogeneous data structures
- Automatic indexing at the element level
- No schema definitions required

*The Japanese insurance company Nissay Dowa introduced an internet service - "Fure Ai Hot Net"-- for its policyholders. Nissay Dowa originally designed a web-interactive Customer Relationship Management (CRM) system using an RDBMS database, but because it was difficult to predetermine data items, they switched to Xpiori's XML Management System, Xpiori XMS. With the flexible data management afforded by XML and Xpiori XMS, Nissay Dowa has realized a significant reduction in its management costs for the customer website.*

### The Setting

Nissay Dowa recently implemented an internet service, named "Fure Ai Hot Net", to provide improved customer service for its policyholders. Through the site, registered customers can access various services such as obtaining detailed information about their policies, tracking the status of accident claims, and receiving notifications for driver's license renewals. Furthermore, Nissay Dowa is planning to use the web site in the future to conduct questionnaires and customer loyalty campaigns for its members. During the web CRM's design phase, controlling costs was a key concern for the developers. Mr. Ichiro Nakajima, the Senior Promoter, IT Planning Room, Information System Department at Nissay Dowa Non-Life Insurance Co., Ltd., said,

*"Internet sales is not the main sales method of Nissay Dowa, and this kind of communication site for the customers does not lead to direct profits. You can say it is a cost center. Thus, it was very important for us to establish and manage this site at low cost."*

Nissay Dowa and its development partner, Hitachi System and Service, wanted a system that would be cost effective, easy to maintain, and customer friendly.

### The Opportunity

In the past, Nissay Dowa was focused on establishing a CRM system for its agents. "Fure Ai Hot Net" was its first experience offering an internet service for policyholders. When they started the development, the developers' first challenge was to keep development and management costs low.

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Hitachi System And Service, which was responsible for the web site's development, originally planned to use a traditional RDBMS when it began the design process in December, 2002. The developers reasoned that a RDBMS would provide a direct connection to the main customer information system and would reduce management-related expenses. Hitachi System's designers realized that RDBMS would be inadequate when they attempted to extract data items to use for the customer web site. RDBMS can only store data in pre-designed databases. Thus, it is necessary to design a database that anticipates all future uses of the database and to secure the storage space for all the data used presently, as well as in the future. Redesign of RDBMS is labor and cost intensive. After completing the project requirement definitions, Hitachi Systems realized that a system designed using RDBMS was not flexible enough to support data needs that could not be anticipated yet.

The database design problems they faced included:

- The developers did not know what data would be collected from future questionnaires and customer loyalty campaigns that had not been created yet.
- Data from past questionnaires was not stored in the existing RDBMS, but Nissay Dowa wanted to collect and save such data in the future.
- The system designers did not know when or how the extracted data would be used.
- Some data items would eventually be unnecessary and deleting them should not require re-design of the database.

When they considered these issues, it was very difficult for Hitachi System's designers to justify using RDBMS. After all, "Fure Ai Hot Net" required a system that could handle changing data requirements on demand.

It became obvious that a system based on RDBMS would require frequent maintenance. Ongoing support costs would be unavoidable. With RDBMS, in order to add data items, the schema needs to be changed, and this work requires review of the database access module. Furthermore, a change of data structure for data transferred between the modules might also be necessary. Thus, every time data items were added or revised, a large amount of maintenance work would be required.

## The Solution

In order to solve these problems, Hitachi System and Service decided to implement a system based on XML, using Xpiori's Xpiori XMS® XML Information Management System. According to Mr. Tetsuya Kasamatsu, Senior Manager, of Hitachi's Web System Development Department,

*"With the XML database, each XML document is managed individually, and the database is less affected even when the data items in the XML document are changed. Regarding the transfer between modules, when you use an XML document, the effect on existing programs is reduced remarkably. Of course, we discussed the risk of the change internally, but, after comparing it with other native XML databases, we decided to use Xpiori XMS, which we thought met the requirements of Nissay Dowa Non-Life Insurance Co., Ltd. with its excellent flexibility and cost performance."*

Mr. Nakajima of Nissay Dowa Non-Life Insurance agreed with this proposal because of XMS' "extremely attractive features that allow one to renew and delete the data items" without database redesign.



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In order to implement the Xpiori system, Hitachi Systems made some modifications to their original program, but it was not necessary to extend the release date of later that year. The current system structure is that Xpiori XMS is installed in the DB server and connected to Web/AP server via PolarLake, which is Enterprise Service Bus (ESB) convertible. The transfer between the modules is done by XML document.

With this structure, when a new questionnaire is conducted, it only requires the creation of the entry display and a change to the reference/analysis display. If the reference/analysis display is well designed, it is possible to revise only the settings file without changing the program.

*“With the RDBMS, if you add new items, the items are added to existing data too. But, with Xpiori XMS, you do not need to change the schema, and it is not necessary to touch any old data. The items are added only to new data. It is very easy to understand.”*

— Ichiro Nakajima

When new items are added to the existing data, the old XML document is deleted and the new XML document is added. The “Full Auto Index Function” of Xpiori XMS automatically creates an index in the original form of all the data. This feature enables extremely high speed searches because the search is done by index and does not require a search of all the items. Other companies cannot compete with the search speed of Xpiori® XMS. Xpiori XMS exactly meets the system requirements of Nissay Dowa’s policy-holder website, and the system’s maintenance costs are 30%-50% lower than the costs of maintaining such a system using a RDBMS base.

## The Result

About 1,000 people are currently registered on “Fure Ai Hot Net”. Nissay Dowa is planning to conduct questionnaires and customer loyalty campaigns in the future in order to achieve closer communication between the company and its members.

*“Because you can renew/delete the data items easily, we can use Trial & Error when we conduct questionnaires and campaigns. It means a lot. You can understand what kind of information the members want while managing the site. The future goal will be to use the feedback and beneficial information we receive from the questionnaires/campaigns .”*

— Ichiro Nakajima

Nissay Dowa will analyze the information received via “Fure Ai Hot Net”, and use it when planning new products. This kind of analysis is also easy to set up with Xpiori® XMS, and the search will be done at high speed.

Nissay Dowa is planning to connect Xpiori® XMS to other systems. In the future, it may consider developing its company CRM system with Xpiori® XMS as the core. Xpiori® XMS will certainly continue to play a very important role at Nissay Dowa Non-Life Insurance Co., Ltd.

*Xpiori, LLC thanks our General Distributor in Japan, Mitsui and Co., Ltd., MKI Mitsui Knowledge Industry, for its cooperation in producing this case study. For more information about Mitsui and Co., Ltd., visit <http://www.Xpiori.jp>*



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For more information about Xpriori, including our product brochures, white papers, and company information, please visit us at [www.xpiori.com](http://www.xpiori.com).

## About Xpriori

Xpriori is a technology innovator and provider of a self-constructing XML database and related products that are powered by the company's patented Digital Pattern Processing technology.

Xpriori's products allow organizations to rapidly respond to changing business requirements by eliminating costly database development time and enabling the creation of adaptable applications – business applications that easily adapt to heterogeneous and ever-changing data sets.

Xpriori is privately held and headquartered in Colorado Springs, Colorado. For more information, visit us on the web at

[www.xpiori.com](http://www.xpiori.com).

## Xpriori XMS

Xpriori® XMS, XML Information Management System, is a self-constructing native XML information management system built on Xpriori's patented Digital Pattern Processing technology (DPP) for the purpose of persisting, managing and developing solutions with XML.

Xpriori Content Manager, XCM, is only one of many applications built to leverage the power of DPP and XML using Xpriori® XML Information Management System.

With Xpriori® XMS, changes in business requirements or upgrades in functionality can be accomplished without traditional application and information design, significantly increasing an application's extensibility and flexibility while dramatically reducing its time to market and total cost of ownership (TCO). Using a pattern-centric approach, Xpriori customers realize a competitive advantage through their ability to deploy high-performance, customizable applications that fully leverage valuable XML information. Please contact Xpriori to find out how we can help you to build XML-centric applications.

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