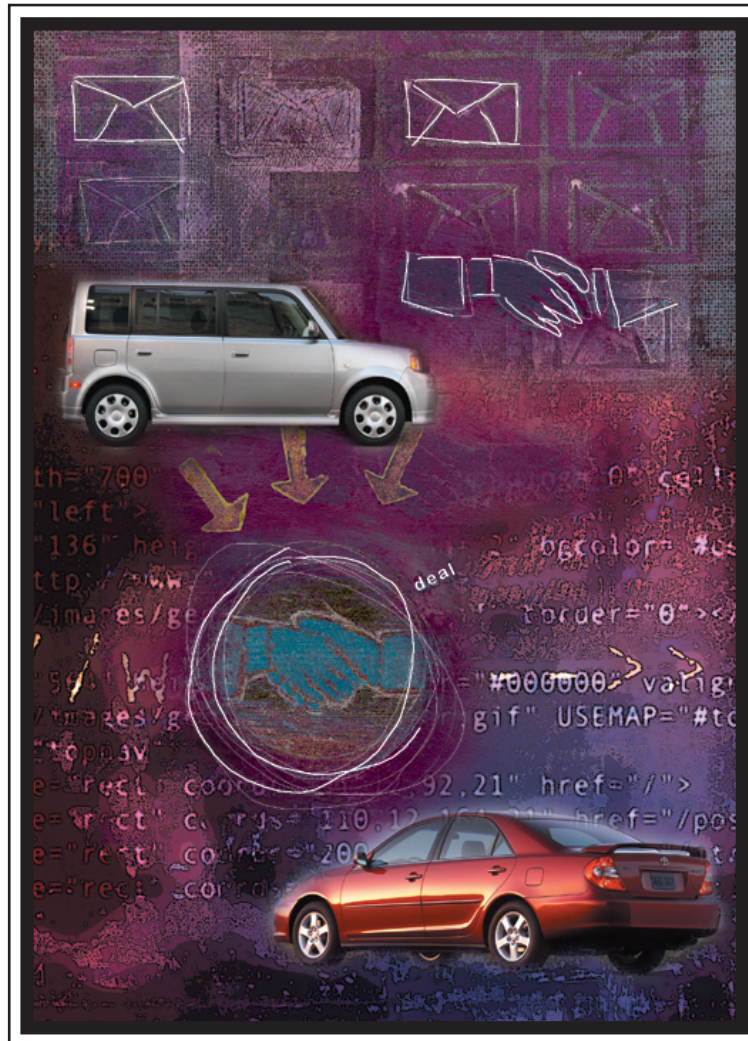


Taking the STAR Lead



How Toyota.com and Scion.com improved
their Internet Sales Lead process

I want to buy a car from you.

That's the message a potential customer sends a dealer through a sales lead – whether they configure a vehicle on the manufacturer's web site or ask for a price quote through the dealer's own site.

Leads from dealer and manufacturer web sites are far more valuable than leads from other sources – they show that the customer is very interested in a particular brand. "For those dealers who are 'early adopters' of technology, sales leads that originate on the Internet are great for generating additional sales," says Jeff Soga, Interactive Marketing Manager for Toyota Motor Sales, USA, Inc.

In a September 2002 NADA survey of 570 dealers, the average dealer's web site generated about 35 leads per month, which resulted in about 8 sales, a 9% increase from 2001. But in a December 2002 EDS survey of 100 dealers, 50% of all Internet based leads were considered to be 'poor' or 'very poor' quality.

Those low ratings came as no surprise. After all, how can a dealer sell a vehicle when he doesn't know who his potential customers are or what they want? One automaker decided to improve this valuable communication channel between its dealers and potential customers.

Show me the lead

In January 2003, Toyota Motor Sales, U.S.A., Inc., Maritz Inc., Cobalt Group, and DHAP Digital teamed together to improve how Internet sales leads are processed and delivered to dealers for its Toyota and Scion brands.

The team was given the task of rebuilding the sales lead processor that collects leads from several sources:

- 'Dealer Locator' on Toyota.com
- 'Dealer Locator' in the "En Español" section of Toyota.com
- 'Inventory Search' for Toyota Certified Used Vehicles (TCUV) on Toyota.com/certified
- 'Build Your Own' section of Toyota.com
- 'Build Your Own' section of BuyAToyota.com

In addition, the newly designed lead processor needed to be extensible for use on Scion.com to allow potential customers to submit leads through the 'Build Your Scion' vehicle configurator.

The main goal of the project was to ensure that sales leads are delivered to dealers in a timely manner. "We thought leads from Toyota.com always reached the dealers immediately, but that wasn't always the case. Since one of the main features of that web site is dedicated to leads, this was a significant business problem," notes Steve Bailey, Toyota's technical architect on the project.

HOW IT WORKS:

1. A user at Toyota.com initiates a dealer inquiry by:
 - Searching for a vehicle in the Toyota Certified Used Vehicle inventory
 - Searching for a dealer through "Dealer Locator" (in English or "En Español")
 - Requesting a price quote on a vehicle configured through "Build Your Own"

- OR -

A user at Scion.com initiates a dealer inquiry by:

- Configuring a vehicle through "Build Your Scion"
- Searching for a dealer through "Dealer Locator"

- OR -

A user at BuyAToyota.com initiates a dealer inquiry by:

- Requesting a price quote on a vehicle configured through "Build Your Own"
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Previously, sales leads from BuyAToyota.com, Toyota.com 'Build Your Own', Toyota.com 'Dealer Locator' and TCUV (Toyota Certified Used Vehicles) came in to Maritz as nightly file feeds. Maritz then forwarded the leads to Toyota dealers' through the Lead Delivery Tool, a web based application offered through Dealer Daily, Toyota's Dealer Communications System. All Leads were also emailed to the dealer by Toyota. In all cases, however, leads resided in several different, source-dependent, data formats; and the design did not archive those leads long enough for later analysis.

According to Bailey, each new lead system developed its own approach to generating leads: "Every lead had a different composition and method of communicating that information. When we decided to start tracking leads to ensure that none were lost, we realized that we'd have to implement a different tracking mechanism for every lead generating system."

Enter STAR

DHAP suggested that Toyota standardize all processes under a single service: a Lead Delivery System. This service would provide the Toyota.com and Scion.com sites with a consistent foundation ensuring that every lead generation system could create, track, and transport its valuable business information. Additionally, each system would be instrumented and monitored to help Toyota and Scion track the total business value being provided by their respective web sites.

The data elements that make up the lead are based on the STAR (Standards for Technology in Automotive Retail) XML standard for Sales Lead version 2.1. "Wherever possible, we like to take advantage of industry standards. The STAR schema was a perfect match for what we were trying to accomplish, " says Bailey.

STAR is a non-profit, auto industry-wide initiative to create voluntary IT standards for the data elements and transmission format used

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2. A SOAP client for Toyota.com, Toyota.com/certified, BuyAToyota.com, or Scion.com receives the inquiry and translates this information into a STAR standard Sales Lead
 3. The SOAP client then forwards this lead onto 2 queues (one for SOAP, one for email) – and a copy of the lead is stored into a Toyota database for reporting purposes
 4. The lead is taken off the queue and pushed via a web service to Maritz every 15 minutes. Toyota.com also emails the Toyota and Scion leads to dealers. If it is a TCUV lead, The Cobalt Group emails the dealer.
 5. A Maritz web service inserts these leads every 15 minutes into its Consumer Intelligence Engine for processing; then every 2 hours, leads are posted into the dealers' Lead Delivery Tool in Dealer Daily for dealers to act on.
 6. An acknowledgement is sent back to the queue to report that the submission of the lead was successful.
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by manufacturers, dealers, and retail system providers to communicate with each other. STAR's initiatives will result in a more efficient data exchange between dealers and manufacturers, with lower costs, more accurate and timely data, and increased levels of customer satisfaction.

At the time, the STAR Sales Lead standard was still a draft and Toyota submitted requirements to STAR hoping to have them incorporated into the final version of the standard - which is constantly evolving. "I was worried that the changes we requested would get hung up in the bureaucracy of the standards body. Fortunately, the STAR organization had an expedited process that allowed us to move through the recommendation review process in a matter of weeks instead of months," says Bailey.

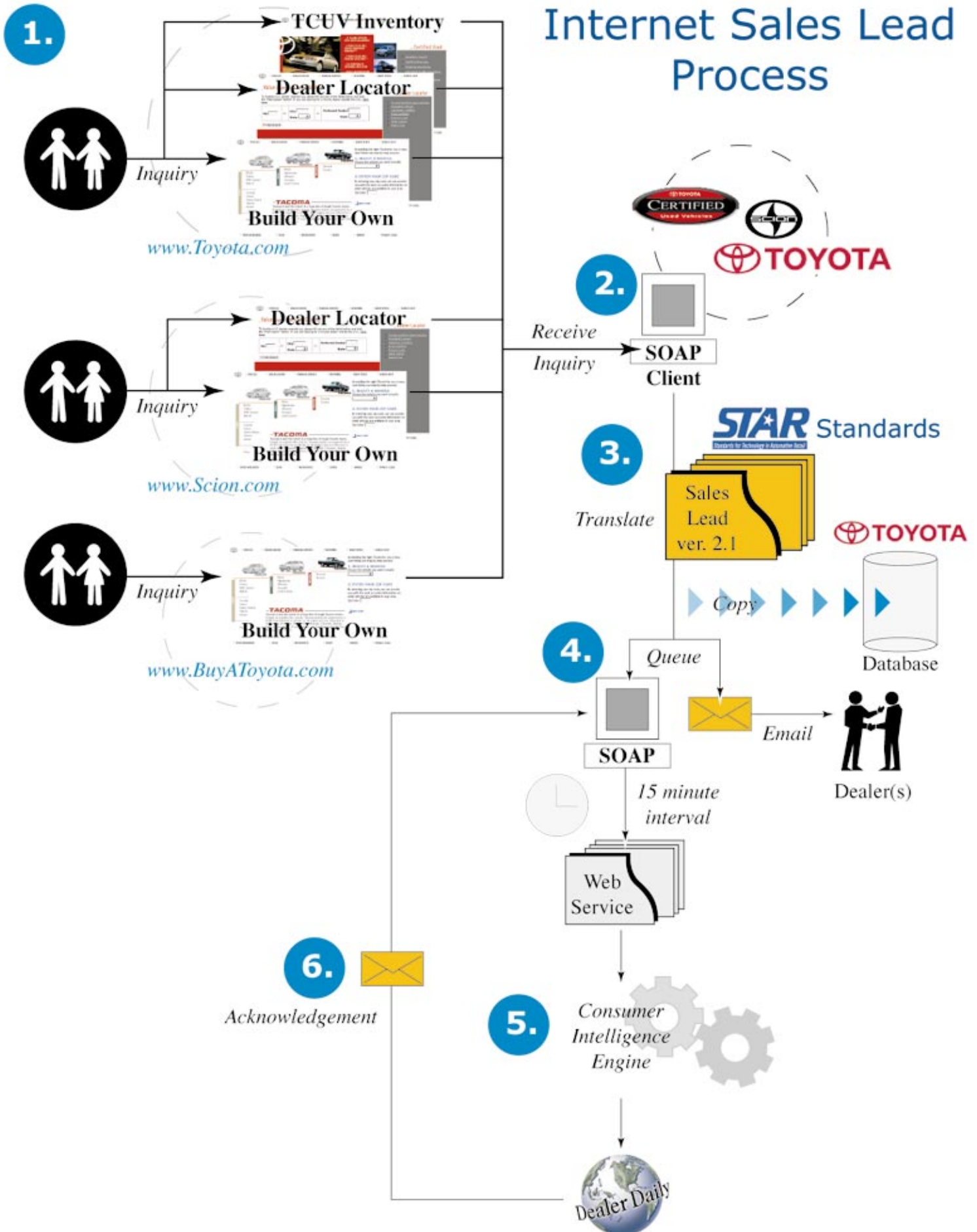
Once finalized, Maritz and DHAP jointly developed Simple Object Access Protocol (SOAP) interfaces that allow the lead to be transferred from the originating application into Maritz' lead database. From there Maritz would insert the leads into Toyota and Scion dealers' Lead Delivery tool.

The STAR schema took some time to comprehend because it contained more data than Toyota needed. Using this auto industry-wide standard, however, sets the stage for others to quickly integrate with in the future. Because the STAR standard is flexible, not all the data elements are required – so designers can decide, for example, whether a prospect's work email address is required data for a sales lead.

Bailey continues: "It didn't take long to implement the STAR schema. Using STAR definitely minimized our design time. While there were issues getting everything just right, there would have been more issues without it.

People might see the time that went into the use of the standard as unnecessary, but in all likelihood more time would have been used

Internet Sales Lead Process



without it. Custom data approaches can be very brittle and difficult to extend across other systems and platforms. In addition, it is unlikely that there will be significant maintenance issues with this standards based approach.”

Architecture Reuse

Reusing this standard architecture also saved time and effort. One other aspect of the project was to improve how Toyota Certified Used Vehicles (TCUV) sales leads to dealers are processed. The Cobalt Group, who hosts the TCUV site, Toyota.com/certified, built their web services architecture to match DHAP Digital’s so used vehicle leads from Toyota.com/certified could be processed by Maritz in the same manner using the same STAR Sales Lead format.

“As a member of STAR, we’re very excited about this project,” said John Holt, president and CEO of The Cobalt Group. “Toyota was the first of the OEMs we’ve worked with to implement this standard. Clearly, Toyota is an innovative industry leader deeply committed to customer satisfaction. We’re confident this initiative will result in quicker lead response times and, ultimately, improved CSI scores.”

The Lexus.com site currently distributes leads to its dealers in a number of ways depending on the urgency of the lead. Leads with a lower level of urgency are uploaded to the Maritz lead system and tracked appropriately. Higher priority leads are sent real-time to dealers via standard text email or XML – dealers choose which format they prefer. If XML, leads are automatically integrated into the dealer’s CRM solution. Urgent leads are also put into a high-touch follow-up process to ensure customer needs are met.

In the future, Lexus.com and other lead generating sources such as Toyota Rent-a-Car may also be enhanced with the new architecture and integrated into Maritz’ lead system.

Michael Dalrymple, project manager from DHAP Digital, estimates that it would take a little more than a week to develop and implement the STAR standard approach for any of these additional sales lead generators. Consider this versus the four months needed for the Toyota.com and Scion.com lead generator enhancements.

“Developers can now use a standard Application Programming Interface (API) for processing leads on all of Toyota’s web sites,” said Dalrymple. “This not only benefits the developers by eliminating the need to design customized storage and delivery mechanisms, it also benefits Toyota by offering a single channel for lead delivery, and thereby streamlining maintenance and auditing capabilities.”

Dealer Benefits

The new design's benefits for Toyota and Scion dealers are:

- All leads are processed in near real time using web services.
- Leads are inserted into the dealer's own Lead Delivery Tool every two hours (previously, this was done once nightly) – they reach the dealer much faster which results in quicker response time to potential customers.
- Guaranteed lead delivery to dealers.
- More visibility into the lead process: stakeholders are acknowledged when a lead is physically received, processed, and validated.
- Since all the lead data is standardized, it is easier to report and perform data mining (i.e.: analyze the number of leads per model per region).

In addition, the updated lead generator system benefits Toyota and Scion dealers through increased data accuracy, quality, and validation. For example, in the previous sales lead system, the phone number "911" would be considered to be valid once submitted through Toyota.com, but would be ultimately rejected by Maritz' system, due to its different design. Now, both Maritz and DHAP use the same validation technique to ensure that phone numbers, as well as the other data elements that make up a lead, are valid.

Both sales lead generators for Toyota.com and Scion.com went live in June 2003. The 'Build Your Own' sections for Toyota.com and BuyAToyota.com go live in August 2003.

Bailey summarizes the project's approach: "Standards are like human languages. They allow organizations in different parts of the world to communicate. In this case, the language of automobile sales had already been laid out and all we had to do was learn to speak it."

More important, Toyota and Scion dealers are now receiving more, higher quality leads which translate into better opportunities for increased sales.



TECHNOLOGIES USED:

Apache, BEA WebLogic, Oracle, Java, JMS, .NET, Sun, Solaris, SOAP, Struts framework, XML, XSD

For more information on STAR standards, visit: www.starstandard.org

www.toyota.com

www.cobaltgroup.com

www.lexus.com

www.maritz.com

www.scion.com

www.dhap.com