# Texas Instruments Enhances Customer Service by Expanding its Competitive Cross Reference Capability

When a business relies on selling hundreds of thousands of products each year, its success hinges upon ensuring that customers can easily determine which products will meet their specific needs. Texas Instruments (TI) is one of the world's premier semiconductor design and manufacturing companies – offering customers nearly 100,000 diverse analog and embedded processing products.. While some TI chips may have one or two competitors others have dozens.

To help customers find the parts they needed, TI long ago began offering its customers a part matching service. A TI sales representative would run the customer's BOM through their database to determine which TI integrated circuits (ICs) met their specifications. This database included not only TI products, but also cross referenced equivalent ICs from other vendors so TI could recommend TI replacements for both TI and non-TI devices. Since TI's philosophy is to minimize end of life for its parts, the company is often able to help customers find comparable replacements for ICs that have been discontinued by competitors.

In 2013, as part of its ongoing commitment to operational excellence, TI set out to enhance its device matching service. The company's business goals were to enable customers to find the product information they need more quickly and make it so easy that customers would return to use the service again and again. To achieve those goals, project leaders decided to make the cross reference service available online to sales teams, resellers and customers so they could perform self-service searches for relevant parts and cross references. At the same time, the team wanted to expand the cross reference data to maximize the number of matches for the customer.

"In our search for a solution," said Mike Hastings, Director, Content Syndication for Texas Instruments, "we looked for a company that could provide the most comprehensive information – literally the industry-wide portfolio – to help us achieve a competitive advantage with cross referencing and work with us as a true strategic partner. We found all these in IHS."

## Building Out Cross References, Self-Service

TI established the first cross-reference database for TI more than 13 years ago. Today, the company's enhanced cross reference service delivers greater value to customers than ever before.

The number of ICs that TI's cross reference database puts at a customer's fingertips has grown from approximately 100,000 cross-references, mostly from TI's top 10-15 competitors, to nearly 2 million cross-references from hundreds of vendors worldwide. This expanded database tracks part numbers and key parametric that customers are seeking to help them confidently make replacement part decisions. It identifies not only exact matches but also equivalent components that may offer additional benefits such as

## Challenge

► Enable customers and sales staff to find more TI parts quicker as a competitive advantage

► Make the cross reference database available directly to customers over the Internet

► Leverage technology and data for process innovations and marketing opportunities

## Solution

IHS Electronic Parts Solutions
and IHS BOM Manager

## Results

► Increased number of cross references in the database from 100K to nearly 2 million

► Boosted results of top 200 parts with lowest searches from last year by 52% this year due to direct cross-references

► Contributed to web traffic spike upwards with improved search results – reducing "no results" findings from 94% to 9%

► Strengthened customers' ROI by enabling them to find alternatives for obsolete ICs and avoid need to redesign products

► Improved marketing and increased sales by leveraging data for highly targeted direct outreach and media advertising

# Texas Instruments Expands Cross Referencing Capability

lower cost, higher performance, or better energy efficiency. TI's self-service device matching also allows customers to find parts cross-reference information faster and more easily on their own. When they do, TI tracks their interactions with the database – such as visits to partner sites, training attendance, and phone calls - to infer what a customer is working on. That enables TI to proactively send additional information to that customer. Explained Hastings, "We use this intelligence to give customers relevant information that makes their job easier without them having to ask for it…and without sending them spam."

## Making Searches More Effective

As a result of expanding its cross reference capabilities and access, the company has dramatically enhanced the value of this service to both customers and TI. By building out cross references with IHS, TI has dramatically improved search results. For example, when the team looked at TI's top 200 valid web searches from last year that resulted in "no results" and ran them again with the expanded database they found that there was a 52 percent increase in direct cross-references. Stronger cross-referencing also allowed TI to slash the frequency of "no results" from web searches from 94 percent to 9 percent – with virtually all of those 9 percent representing products that TI simply does not make.

Overall, customers are now finding information they need more quickly and using the cross reference site more frequently, resulting in a large spike in Web traffic and contributing to higher overall sales for TI.

## Extending Return on Investment

With its growing usage, the cross reference service has become a key differentiator for TI. As Hastings explained, "A lot of companies 'obsolete' their way to profitability. We don't do that. We're the last company standing. When a competitor 'obsoletes' a device, customers can run into inventory shortages. Our customers know that if they come to the TI website, they'll find a cross reference."

This ability to quickly find cross-referenced ICs can directly impact a customer's profitability. Companies put enormous amounts of time, effort, and money into engineering their products. When a component they use is declared as end-of-life, this may drive

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significant reengineering costs. By helping customers find crosses for obsolete devices, TI's cross reference service helps them squeeze more return on investment (ROI) out of their product designs.

## Leveraging Intelligence to Drive Growth

Working with IHS as a strategic partner helped the cross reference service deliver greater value to customers and enhanced TI's own marketing and sales efforts. TI now has access to data from all media publications in its market. TI analysts have identified the top 100 competitor devices that customers are cross-referencing and now run targeted marketing programs on various media channels. When customers go to a media site and type in a part number matching one of these top 100, the TI ad will appear at the top of the list results.

In another case, Hastings leveraged IHS information when he analyzed several months of TI purchase orders. He found that a competitor was getting more "Buy Now" activity than TI for a particular product line. With this intelligence, we were able to adjust our communication strategy for that product line to capture more of the market. .

"TI has such a large portfolio of products, we may be losing sales in an area we don't know about. By having all this great data, we're able to see what impacts sales," said Hastings.

While TI has already achieved substantial benefits from its partnership with IHS, the company continues to look for ways to expand it to better serve customers. For example, Hastings said, "By working with IHS in the future, we hope to develop additional algorithms that will allow us to do even more predictive marketing."