

IRON SPEED DESIGNER

BUILD AND DEPLOY DATABASE APPLICATIONS WITHOUT PROGRAMMING

"We have developed over 10 applications using Iron Speed Designer that are used daily by operations and maintenance personnel. We have saved over \$200,000 in IT salaries since we did not have to hire IT web developers or IT database experts."

- Reginald D. Thorpe

Information Support Group Leader

Washington Suburban Sanitary Commission

Increasingly, developers, CTOs, IT business analysts are turning to a new, breakthrough approach for rapidly developing robust database applications: Application Generation.

Iron Speed Designer builds database and reporting applications for the Web, Cloud and Microsoft SharePoint environments – without programming.

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Our Story

Back in 1995, my partners and I launched Onsale, an online auction house and e-commerce website selling all sorts of excess and out-of-stock merchandise. By the end of 1999, we had grown the company to a run rate of over \$600M in annual sales.

We had become, in essence, a giant web-based ERP system, perhaps the first of its kind. Everything was heavily automated – sales to fulfillment to vendors. It worked like a charm and was a thing of beauty, handling over 12,000 orders, 500,000 customer transactions, and sending 750,000 email updates each day of the week.

But we also had a big problem. Our IT staff had ballooned to 110 people and we were constantly supporting and updating 65 different software modules handling everything from order taking to bid tracking to email notification to supplier inventory management and trouble tickets. In short, we were drowning in code – over one million lines of it!

In the early days, we thought an e-commerce operation would be like a mail order business, minus the headphones and telephone operators. Our software would simply replace the role of the order taker and customer service representative. And, the software would integrate with our suppliers. We thought it would take no more than five or ten engineers to build and manage the whole thing. We thought, "How complex can this software be?" After all, e-commerce is basically a database application – a set of web pages, input forms, and SQL queries. In reality, however, every one of those 65 modules was constantly evolving along with the business and had one or two engineers updating it on a nearly continuous basis.

Along the way, we began to realize the vast majority of our code was pretty straightforward. Only a small fraction of our code – maybe 20,000 lines – was truly the "secret sauce" behind our operation. Most of our code simply moved data between web pages and databases.

A new company was born

So an idea was born...and a new company – Iron Speed – founded on the idea of building applications without programming. How is this possible? Quite simply, we figured out how to automatically generate applications including all your web pages, data access code, SQL statements and more – all without programming!

Our flagship product, Iron Speed Designer, is the quickest way to publish your database to the Web, the Cloud and even SharePoint. Simply point to an existing database and let Iron Speed Designer generate a visually stunning, feature-rich Web 2.0 interface that is easy to customize and ready to deploy. In just minutes you get a complete database application without programming.

You won't need to hire a graphic designer to make your Web applications look good. We already did that! The generated Web pages – your application's user interface – are simply stunning because we used a professional graphic designer to create the 29 different page styles. What's more, you can customize these styles or create your own if you have a standard corporate look and feel.

Your applications will have sophisticated master-detail pages, workflow pages, and built-in reports in PDF and Microsoft Word. They'll also have built-in data integration features like export to Microsoft Excel for further analysis and reporting. And our Data Import Wizard lets your users import data into your application and database from Microsoft Excel, Microsoft Access and ASCII CSV files.

What You Can Build with Iron Speed Designer

Iron Speed Designer builds database-driven applications that can be deployed to the Web, the Cloud or Microsoft SharePoint environments. These applications are typically used for:

- Data entry and management – collecting and editing data from users.
- Reporting and tracking – reporting, summarizing and visualizing data.
- Workflow and scheduling – automating step-wise business processes.
- Business process automation – orchestrating data flow between multiple systems.

Iron Speed Designer generates complete .NET applications – pages, code and SQL queries – without programming. These applications contain a variety of rich, interactive page types, reports, data import and export features and integrated application security.

A typical Iron Speed Designer application for order management.

The screenshot displays a web application interface. On the left is a vertical navigation menu with categories like Customers, Employees, Orders, and Products. The main content area is titled 'CUSTOMERS' and shows details for a customer named 'Alfreds Futterkiste' with contact information for Maria Anders in Berlin, Germany. Below this is a tabbed interface with 'Orders' selected, showing a table of orders with columns for Employee, Order Date, Required Date, Shipped Date, Ship Via, and Freight.

Employee	Order Date	Required Date	Shipped Date	Ship Via	Freight
Suyama	8/25/1997	9/22/1997	9/2/1997	Speedy Express	\$29.46
Peacock	10/3/1997	10/31/1997	10/13/1997	United Package	\$61.02
Peacock	10/13/1997	11/24/1997	10/21/1997	Speedy Express	\$23.94
Davolio	1/15/1998	2/12/1998	1/21/1998	Federal Shipping	\$69.53

Advanced application features like advanced user interface controls, multi-lingual support and third-party control support round out Iron Speed Designer generated applications.

Export formatted data directly to Microsoft Excel for further analysis and reporting.

	A	B	C
1	Customer	Employee	Order Date
2	Vins et alcools Ch	Buchanan	7/4/1996
3	Toms Spezialitate	Suyama	7/5/1996
4	Hanari Carnes	Peacock	7/8/1996
5	Victuailles en stoc	Leverling	7/8/1996

Iron Speed Designer is able to generate complete, fully functional applications directly from an existing

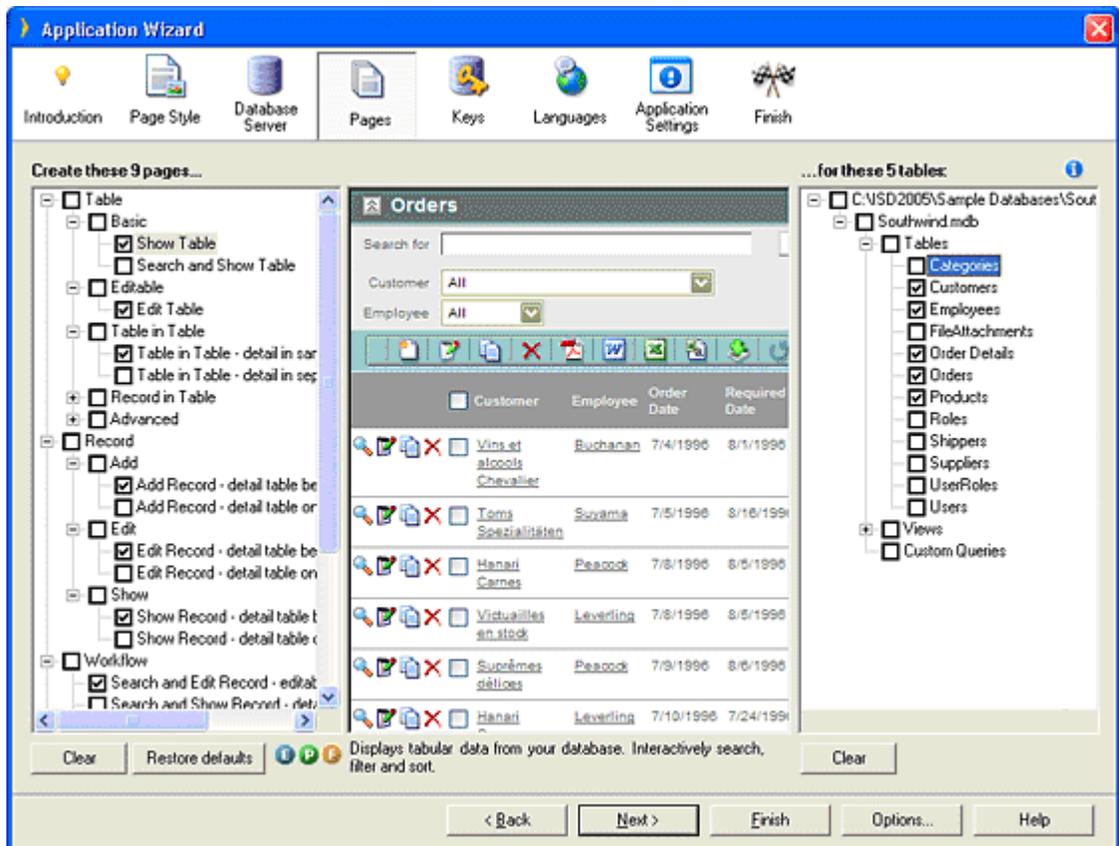
database using a simple application wizard. Applications may be manually customized using an intuitive layout spreadsheet and simple Microsoft Excel-like formulas.

How Applications are Created

Iron Speed Designer generates applications by pointing a simple application wizard at an existing Microsoft SQL Server, Oracle, MySQL or Microsoft Access database. Application Web pages and components – tables, panels, controls and navigation – are created and connected together, and the underlying code and SQL is automatically generated.

A brief example illustrates this point. Suppose you need to build an order entry system that allows sales people to create, edit and retrieve sales orders. This application might have input forms for adding and editing orders and a page for displaying orders for selected customers.

Using Iron Speed Designer, the developer first selects the database tables and views necessary that underpin the application. Next, he selects the page types he wishes to create for the selected tables. When ready, the developer lets Iron Speed Designer generate the desired Web pages, source code and SQL, including code for all of the Web pages, controls, and database connectivity infrastructure.



The Application Wizard in Iron Speed Designer generates sophisticated Web 2.0 pages from selected database tables and views.

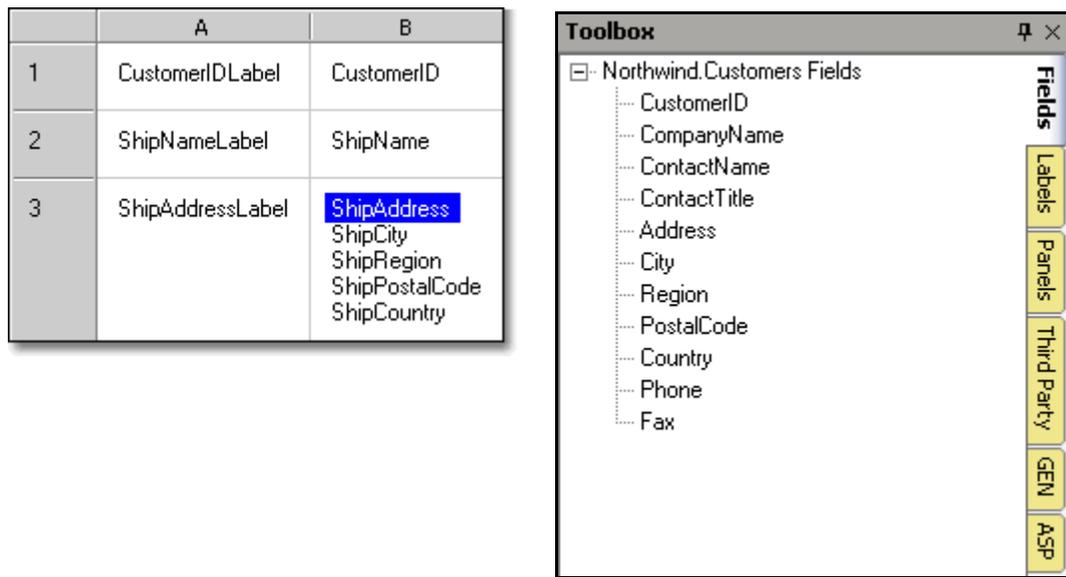
Database and reporting applications like these lend themselves to application generation because they use straightforward database connectivity and application infrastructure. They all need data entry pages

for the selected database tables and views, reporting pages to view and analyze the data in the application, application security, and other infrastructure.

Customizing pages

Most applications require some amount of page customization, and while Iron Speed Designer can make many intelligent assumptions, it can't always create the optimal page layout or even decide the best compliment of fields to include on a page and which ones to omit.

Iron Speed Designer uses a universally understood spreadsheet metaphor for page layout editing. Individual controls and other components are displayed in spreadsheet cells and pages are rearranged by dragging these data bound controls to their desired locations in the spreadsheet.



An intuitive Excel-like layout spreadsheet makes page customization easy. There is no HTML or ASPX to learn!

Drag data bound controls from the Toolbox onto your page. No coding is necessary to connect components.

Additional data bound controls are easily added by dragging them from the Toolbox onto the layout spreadsheet. You can, for example, drag complete panels – parent or child, record or table – onto your page, as well as third-party controls and other components. No hand-coding is required.

When ready, the page is regenerated and viewed in an accompanying 'Live Preview' screen. Iron Speed Designer converts the logical spreadsheet layouts into corresponding HTML table, row and cell constructs in the generated pages. Since no knowledge of HTML, ASPX or .NET concepts is required to customize page layout, non-developers and para-technicals can build applications as easily as seasoned professionals.

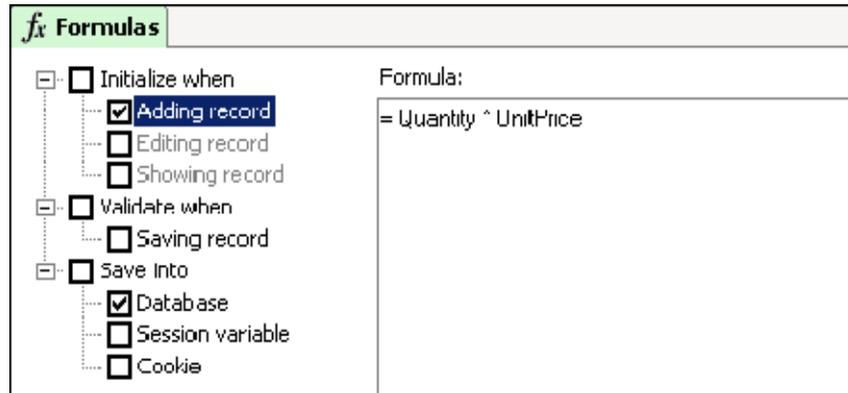
Pages are viewed on a Live Preview screen, displaying actual application data.



Customizing application behavior and business rules

Custom business logic can be added using simple Excel-like formulas. For example, most calculated values, conditional text displays and dependent dropdown lists can be implemented as simple one-line formulas. After selecting a control in the Quick Layout Spreadsheet, a set of events is displayed in the Formulas tab, each of which may have a custom formula executed when that event is triggered.

Pages are viewed on a Live Preview screen, displaying actual application data.



A wide variety of built-in functions and operators are available for use in formulas.

Application Generation Yields Huge Savings

How well does the application generation process work? An analysis of customer applications indicates they save an average of 19 person weeks and \$37,000 of development costs per application. In short, Iron Speed Designer pays for itself on your first application!

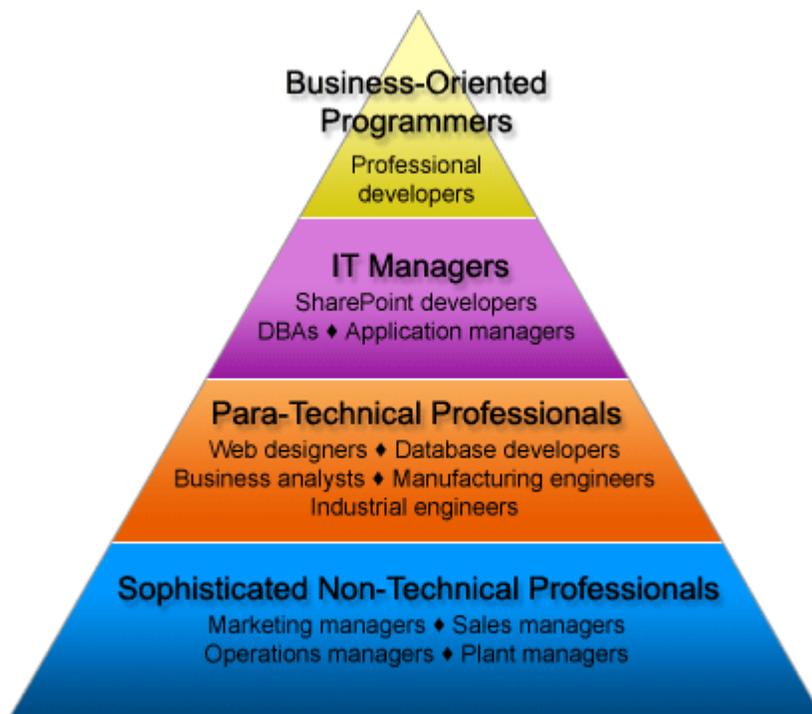
Customers tell us small groups of three or four using Iron Speed Designer are producing more than entire development teams. They can turn around applications in just a few hours or days rather than weeks and months, all without programming. Moreover, they are about to build applications without paying steep internal transfer costs charged by their regular development organizations.

- **Reduced software development costs.** Applications can be developed and deployed faster and more efficiently with less cost in human resources. Proof-of-concept systems can be rapidly built, feedback gathered, and quickly modified.

- **Consistent look and feel.** Generated applications have highly consistent and professionally designed user interfaces, giving applications a finished look and feel, even at the prototype stage. A consistent look and feel across applications reduces end-user learning curves when assimilating new applications.
- **Simplified application maintenance.** Generated applications follow a highly consistent architecture, allowing any developer maintain any application. There is little or no 'ramp up' time necessary for one developer to maintain another developer's application because the architectural knowledge transfers from one application to another.

Who Uses Iron Speed Designer

A diverse group use Iron Speed Designer, including many who are not programmers.



- **Business-oriented programmers** use Iron Speed Designer to develop applications in a fraction of the time normally required by traditional hand-coding methods. This frees them to focus on custom business logic that is truly unique and high-value.
- **IT managers** typically have full-charge support responsibility for a business unit, ranging from desktop support to custom application development. While they may have a software development background, they don't have the time necessary to build applications by hand. Iron Speed Designer enables them to quickly deliver applications to their business units in a fraction of the time and without hand-coding.
- **Para-technical professionals** work in IT-related jobs but don't normally develop software. Iron Speed Designer enables these users to build Web applications – a task they were not previously able to perform -- because no programming is required.

- **Sophisticated non-technical professionals** generally have management responsibility in a business segment. Iron Speed Designer empowers these users to build and deploy Web applications without relying on time-challenged IT departments to deliver applications on their behalf.

A Happy Ending to Our Story

Our story has a happy ending. Not only did we develop a tool that saves businesses thousands of dollars, we use Iron Speed Designer to manage our own business as well. Our company, Iron Speed, Inc., runs entirely on database-driven web applications built with Iron Speed Designer. We eat our own cooking! This application handles thousands of transactions per month and now contains millions of rows of data. Here are the applications we currently use daily in our business, an integrated system we collectively call "Nexus".

- Order entry. An online store takes credit card orders from customer and enters them into our database.
- Product license management. Customers can review their license portfolio online at any time.
- Customer workflow. Sales representatives follow up with customers, schedule follow-up calls, and dynamically update our sales pipeline.
- Sales management. Our sales team monitors account manager productivity through a series of real-time dashboards.
- Technical support case workflow. Our customers and prospects submit technical support cases online. Our technical support engineers respond to support cases and track status of open cases.
- Marketing campaign management. Prospects activate Iron Speed Designer trials. Our marketing team monitors the performance of our media partners, allowing us to efficiently allocate marketing resources to more productive campaigns.
- Engineering task management and workflow. Engineering tasks and bug reports are entered into our database. As engineers complete tasks and fix bugs, they advance to our QA department for certification. Engineering tasks can be dynamically re-assigned based as workloads change.

The real litmus test is how many engineers we have devoted to building and evolving our Nexus system along with our business as it grows: one! That's all, just one engineer who works on Nexus part-time.

About Iron Speed

Iron Speed is the leader in enterprise-class application generation. Our software development tools generate database and reporting applications in significantly less time and cost than hand-coding. Our flagship product, Iron Speed Designer, is the fastest way to deliver applications for the Microsoft .NET and software-as-a-service cloud computing environments.

With products built on decades of experience in enterprise application development and large-scale e-commerce systems, Iron Speed products eliminate the need for developers to choose between "full featured" and "on schedule."

Founded in 1999, Iron Speed is well funded with a capital base of over \$20M and strategic investors that include Arrow Electronics and Avnet, as well as executives from AMD, Excelan, Onsale, and Oracle.

The company is based in Mountain View, CA, and is located online at <http://www.ironspeed.com>.