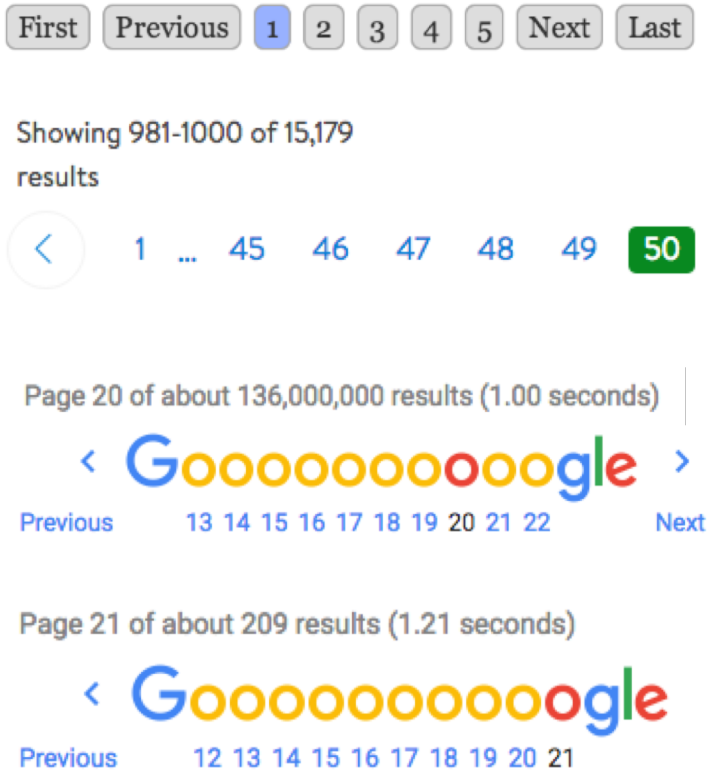
Advanced Web Technology for Big Data Management, Analysis and Knowledge Harvesting

George Toms, Ph.D.
President & CTO

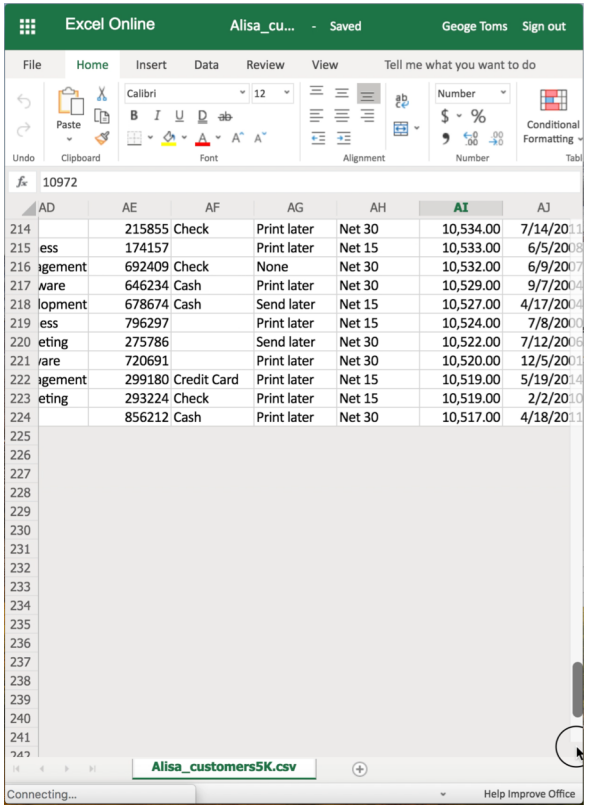
Problem

MegadataWeb
Unprecedented simplicity and performance

Data is doubling in size every six months. It is currently being stored on clouds and processed on super computers with burdensome resources (RAM memory, storage, and processors). On the Web now we have only few choices: pagination, “Load more” button, infinite scrolling, Server-side row model, and virtual scroll!



Microsoft Excel Online (on desktop)



Solution

MegadataWeb
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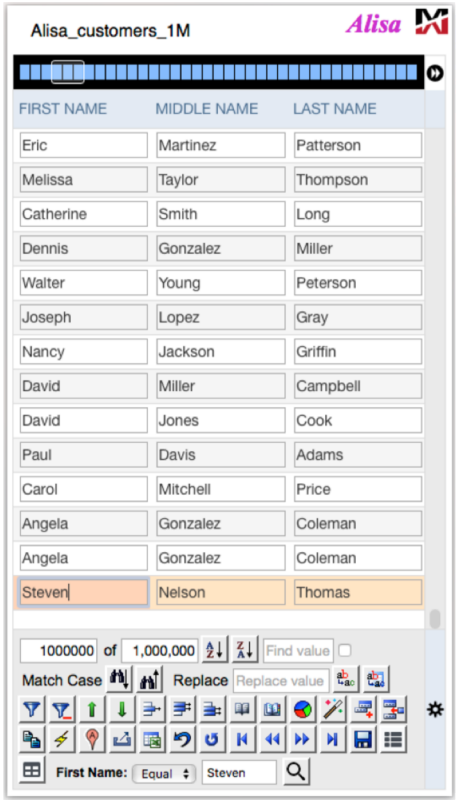
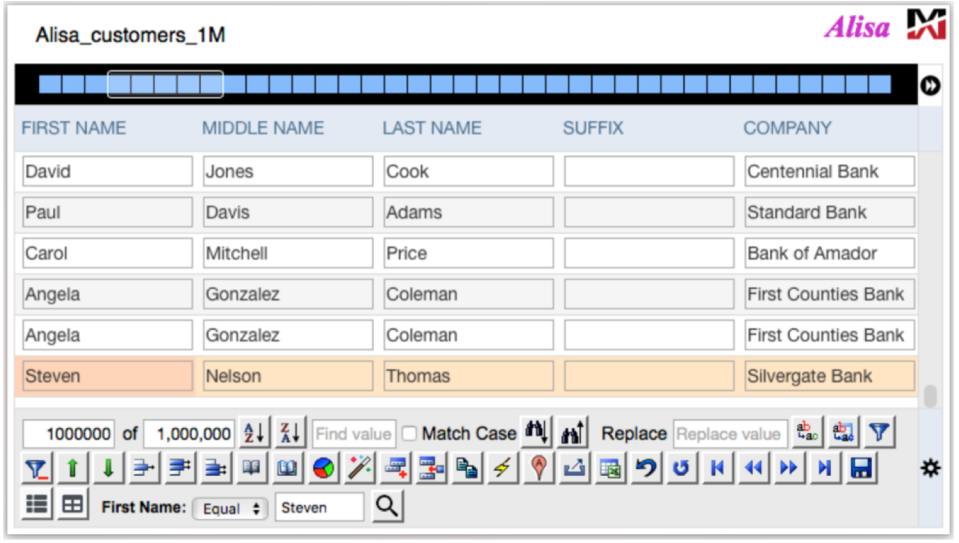
We invented and fully implemented new Web technology that allows us to harvest knowledge from big data on a laptop, tablet, or phone inside a Browser, based on the user's needs – not the application's limitations. We can scroll and process data the same way as desktop applications.



Megadata Web
(iPhone 6 Plus)



Benefits

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Unprecedented simplicity and performance

All Web applications which process data can be benefited from Megadata Web in many directions, including:

1. Significantly Greater Processing Speed
2. Ability to Process Large Volumes of Data
3. Off-line Data Processing Capability
4. Minimized Bandwidth Usage
5. Reduced Memory Requirements
6. Compact Data Formats
7. Advanced Data Processing Algorithms
8. Quantum Leap Screen Rendering Performance
9. Support of Responsive Design Objectives by Placing All Data and Controls “above the fold”
10. Advanced “toolkit” of Features:

- Navigation, scrolling
- Sorting, searching, filtering
- Totaling
- Reporting
- Exporting
- Linking, mapping, e-mailing
- Editing, replacing, adding, deleting
- Undo, start over
- Save, save all
- Drag & drop
- Cell & Table customization
- Hierarchical column grouping
- WYSIWYG Editor

Target Clients

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- All corporations for business analytics and big data management
- All major high-tech companies (Microsoft, Apple, Google, etc.)
- Banking, financial, and bookkeeping applications
- Credit card companies
- Internet stores
- Biotech industry for DNA/RNA processing
- IoT Industries: agriculture, defense, infrastructure, insurance, logistics, manufacturing, mining, retail, transportation, utilities...
- Healthcare, telecom, government, oil and gas, education, and life sciences
- Software for knowledge workers – analyst, engineers, scientist, planners, managers, salespeople, researchers, teachers, students, etc.

Proof of Concept

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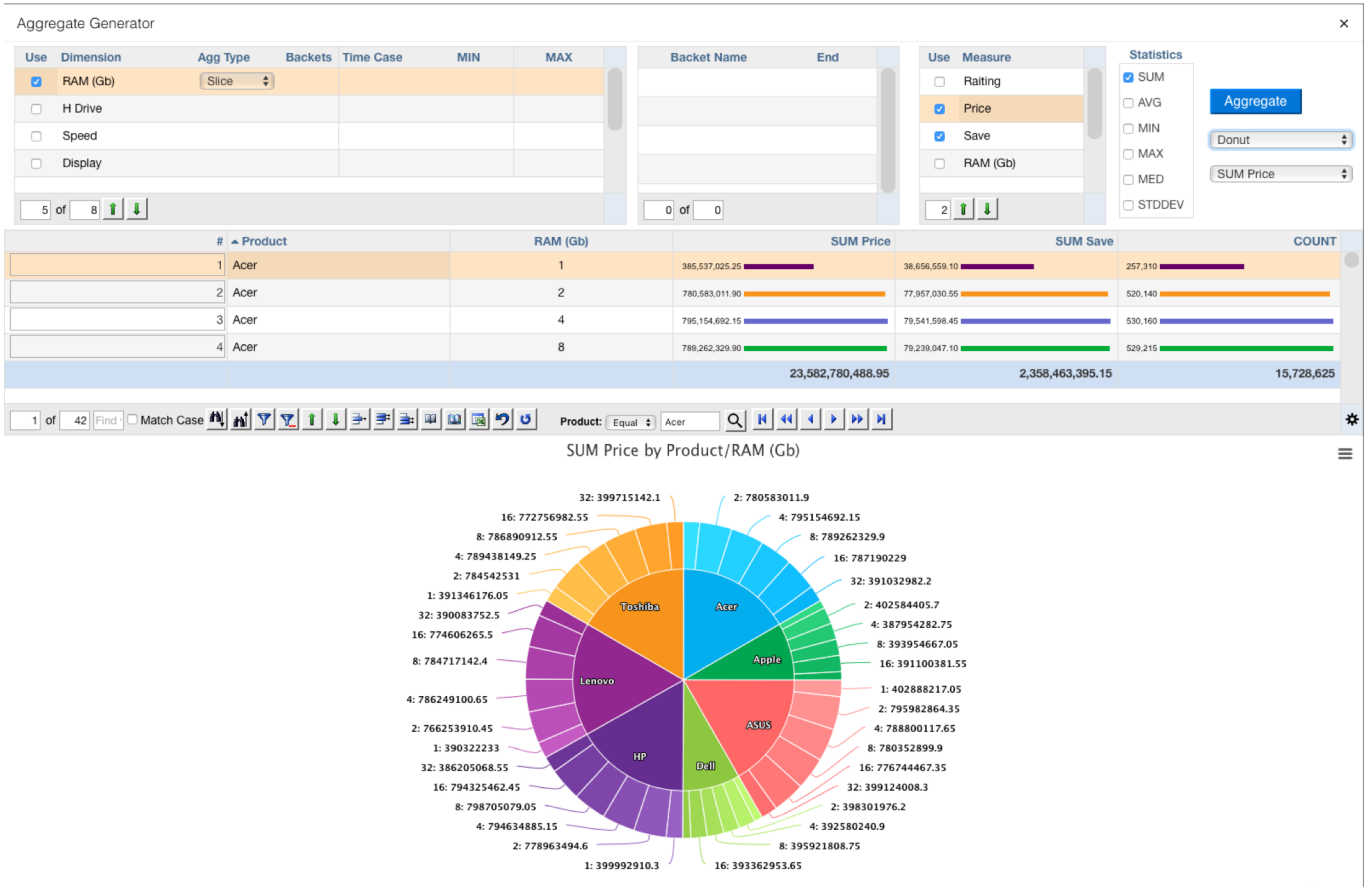
Based on our technology, we have created the Web system **Alisa** for visualization and analysis of big (up to **16,000,000** records) data tables.

Compare this to Microsoft Excel which processes a maximum of only **1,048,576** records.



Proof of Concept (continue)

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The superior processing capabilities of Megadata Web are evident in the following table, reflecting Megadata Web benchmarks compared, purely for context, to those same specific features in Microsoft's Excel running on a laptop with 16GB of RAM:

Command	Excel 1M	Megadata Web 1M	Difference	Megadata Web 15M
Number of rows	1,048,576	1,048,576		15,728,640
Open file	48 sec	26 sec	**> 1.8x**	106 sec
Scrolling horizontally	Fast	Fast	**No diff.**	Fast
Scrolling vertically	Fast	Fast	**No diff.**	Fast
Sorting	17 sec	< 1.5 sec	**>11x**	< 15 sec
Reverse Sorting	11 sec	< 0.05 sec	**> 220x**	< 0.1 sec
Undo	10 sec	< 0.025 sec	**> 400x**	< 0.06 sec

Competitive Advantages

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1st TO MARKET

In some cases, we don't have any competitors at all because other current Web technologies cannot begin to handle processing that much data.

SIMPLICITY

An advanced data processing engine was created with an emphasis on simplicity, usability, performance, and maximum functionality without the problems inherent with other solutions.

PERFORMANCE

Dramatic increase, by up to 1,000 times, the amount of data/information that can be delivered in just a single web page and process it much faster than any other competitor on the market today.

SCALABILITY

Distributed computing - former server-side SQL tasks, like data sorting, indexing, and reporting, are now accomplished more efficiently on the end-user's browser-equipped PC, Mac, phone, iPad, or tablet.

BANDWITH

Reduces, by up to 98 percent the redundant and unnecessary network traffic associated with current database querying methods. This translates to increased network capacity for future expansion and lower maintenance expenses.

FLEXIBILITY

Megadata Web enables you to create portable, one page business applications with Web simplicity, desktop performance, and secure offline data processing based on the **user's needs** – not the application's limitations.

Current Climate

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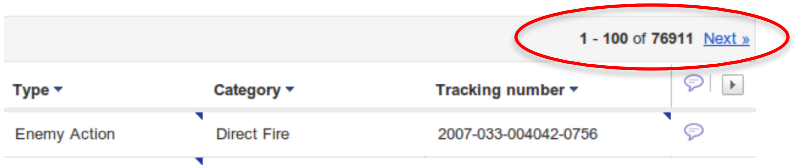
Google [fusiontables]

Fusion Tables is a Web service provided by Google for data management. The website launched in June 2009. Even now Fusion Tables have pagination on every Web table:



Microsoft Excel

Desktop application Microsoft Excel is a spreadsheet that processes a maximum of only 1,048,576 records.

Compare these two existing products to our Web system Alisa for visualization and analysis of big data tables (up to 16,000,000 records on a laptop and up to 32,000,000 records on a desktop).

Intellectual Property

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Megadata Web has its own technology platform

“George Toms JavaScript (Toms JS)”,

developed over the last 17 years, and is backed by following intellectual property copyrights:

- Copyright TXu001015218 / Sep 25, 2001
- Copyright TXu001054453 / Aug 13, 2002
- Copyright TXu001149806 / Nov 03, 2003
- Copyright TXu001603087 / Nov 19, 2007
- Copyright TXu001774539 / Sep 09, 2011
- Copyright TXu002032703 / May 23, 2017

Market Evaluation

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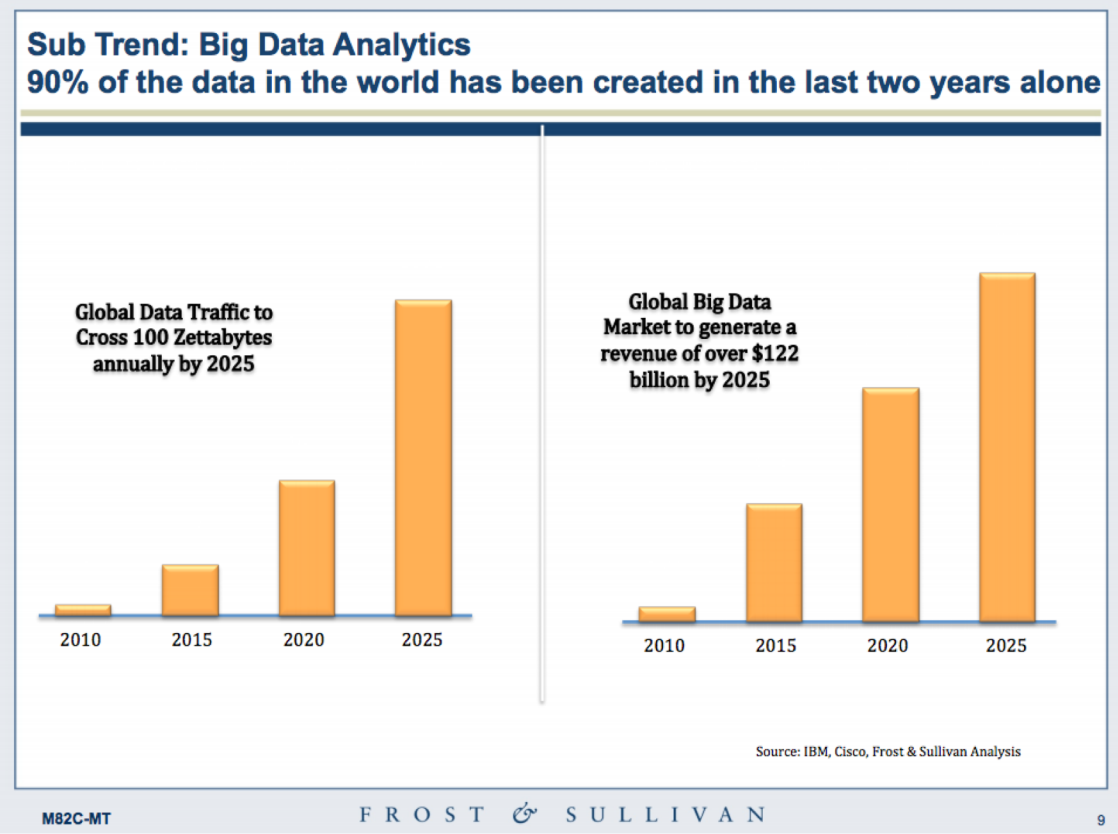
The global Big Data market is projected to reach $122B in revenue by 2025.

Source: World's Top Global Mega Trends To 2025 and Implications to Business, Society and Cultures.



Team

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George M. Toms, Ph.D.

President and Chief Technology Officer

Dr. Toms is an expert in distributed Web client (Browser) off-line data processing, Rich Internet Applications, software integration and internationalization, algorithm optimization, mathematical logic, parallel Boolean data (vectors and matrices) computing, data sorting and searching, text parsing and processing, custom database optimization, and application acceleration.

Nikolai N. Pepik

Chief Executive Officer

Mr. Pepik has experience in working with international businesses in both the Russian and American markets which has given him the ability to manage and lead successful international companies.

Potential Acquisitors

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George Toms, Ph.D., President & CTO
mail@megadataweb.com
+1.510.375.4443