6. Next Steps

As a next step, we'll definitely start using the upcoming enhancements, like sending new signals to Office Graph. Being able to add on-premises content to the Graph will make a significant increase in its value. Also, we're investigating in what kind of custom application layer would fit the customer's special needs, besides Delve's out-of-the-box experience.

2) AHREN LEHNERT

Using text mining and analytics to improve the search experience and enterprise taxonomy for an oil and gas products and services company

1. About the Case Organization

FMC Technologies is an oilfield equipment and services company based in Houston, Texas specializing in Subsea Technologies, Surface Technologies, and Energy Infrastructure. FMC Technologies has more than 18,000 employees in 24 facilities around the globe.

2. About the Challenge

In our move from six separate search instances in four separate SharePoint farms to a single instance of SharePoint 2013 search, we needed to consolidate search terms and phrases from across the globe to seed typeahead search suggestions, gather terminology for taxonomy development for automatic categorization, and develop singular "best bet" locations for common activities.

Prior to our approach there was no single search instance or singular reporting on search queries providing insight into the types of information being sought by employees across the globe. The search experience was confusing and fragmented and search results were poor. Additionally, there was no common controlled vocabulary for metadata values applied to all searchable content, resulting in a fragmented information retrieval experience. The new search implementation and use of the FMCTI Taxonomy for the automatic application of metadata affects all SharePoint users at FMC Technologies since SharePoint is the platform for our Intranet.

3. What We Did

We collected all search terms and phrases from the various search instances, regularized the output by consolidating duplicates, correcting corruptions in the information output, and eliminating search term noise. We then analyzed the final, consolidated list of search terms and phrases, looking for patterns in the information to further develop the FMCTI Taxonomy and determine best bet locations for promotion in search results.

Our Intranet platform consists of four, separate instances of SharePoint 2010 and our new single search tool is SharePoint 2013 search. We use Smartlogic Semaphore to manage the FMCTI Taxonomy, for text mining, and auto-categorization. We used SAS JMP Text Miner for search term analysis. There were no standards applied to the analysis, but we use various terminology standards for the creation of terms for the FMCTI Taxonomy.

The innovation in this approach was that lack of consolidation and reporting prompted us to use other analytical methods to understand better the search needs of our employees globally. Rather than reacting to what we believed or assumed people were searching for or extending our learnings from earlier user behavior testing, we used real data to arrive at an understanding of the actual topics users were seeking in content.

4. Challenges and Lessons Learned

Our main challenge was extracting and consolidating data from disparate sources due to duplicate searches with separate forms and counts, searches in multiple languages, and corrupted information in the output. Once we are on a single search, analysis of search terms will be easier as the search counts will be consistent. Multiple language searches will continue to be a challenge, but we will map common concepts to a single English term form to facilitate information retrieval in multiple languages.

Lessons learnt:
There is such a thing as too much analysis. Sometimes having a broader view of the information is better than having detailed, nuanced results. We will spend less time on initial analysis and more time on regular analysis in smaller chunks over greater periods of time.

Advice:
The time spent on pre-launch analysis is worth the effort to avoid starting from scratch and further alienating already frustrated users by implementing a search which appears to have no connection to what existed before. The analysis provided a baseline from which to measure search success and provide real data from which to make decisions.

5. Impact and Benefits

Business benefits are as yet to be determined. The prospective business impact is that employees will spend less time searching for information and understand the value of categorizing content in order to group content and understand relationships between concepts to make new information discoveries. Extracting more value from existing information is critical, particularly when an industry faces a downturn.

It's hard to say if the benefits could have come from other sources. However, the lack of trust and use of the search tools as they were showed that any improvement would be a success. We will know that our effort made a difference as we monitor the rate of search use and successful and unsuccessful searches. We hope to extend this analysis to determine connections between information retrieved and actual business decisions and their outcomes.

Reasons for success:
The need for an improvement in search bordered on desperation. Many employees have been asking for improved search. The delivery of an improved search tool and user experience coupled with the automatic application of standardized metadata will not only provide a better search experience but will also bolster the design of search-based applications to improve execution in specific use cases.

6. Next Steps

Our next steps are to continue to enhance search functionality with improvements in the search user experience and additional search features. In addition, we will actively pursue the development of search-based applications within SharePoint and connections to external information in other systems and file shares. Expanded search consolidation will also broaden the use of classification of content with standard metadata from the FMCTI Taxonomy. Finally, continued analysis of search terms and response to user requests for content classification will aid in the further development of the FMCTI Taxonomy and lead to improved content classification.

3) CHARLIE HULL

Implementing open source search for a major specialist recruiting firm

1. About the Case Organization

Founded in 1960, Reed Specialist Recruitment is a specialist provider of permanent, contract, temporary and outsourced recruitment solutions, and IT and HR consulting. Reed operates in Europe, the Middle East and Asia Pacific and has more than 3,000 permanent employees working out of 350 offices worldwide across 30 specialisms.

2. About the Challenge

The main objective was to replace the existing recruitment search function which used an Oracle database: searches took several minutes to complete and returned an un-ranked list of results, which staff would then have to work through by hand. The search function was used by all Reed's recruitment consultants to find candidates, jobs and companies and its slow speed and varying quality led to an increased workload.

3. What We Did

Flax designed a flexible and powerful search infrastructure based on the open source search engine Apache Lucene/Solr. A custom indexer written in Java navigated the highly complex legacy database structure used by Reed. Using Apache Tika, plain text was extracted from CVs (Resumes) in Microsoft Office & PDF formats and in many languages including English, Polish and Chinese. A test framework was built to gauge and tune performance. A single search server provides the entire search capability over 12 million records, with sub-second search response times.

4. Challenges and Lessons Learned

The complexity of the existing data model led to a highly flexible pipeline being required, to allow us to easily change how data was mapped into the search index. The new search engine was also such a radical change in terms of performance and features that users required significant retraining to take advantage of these – they simply had forgotten to trust search. Organizations planning this kind of migration should focus on the user experience in particular. Moving to an open source platform may also

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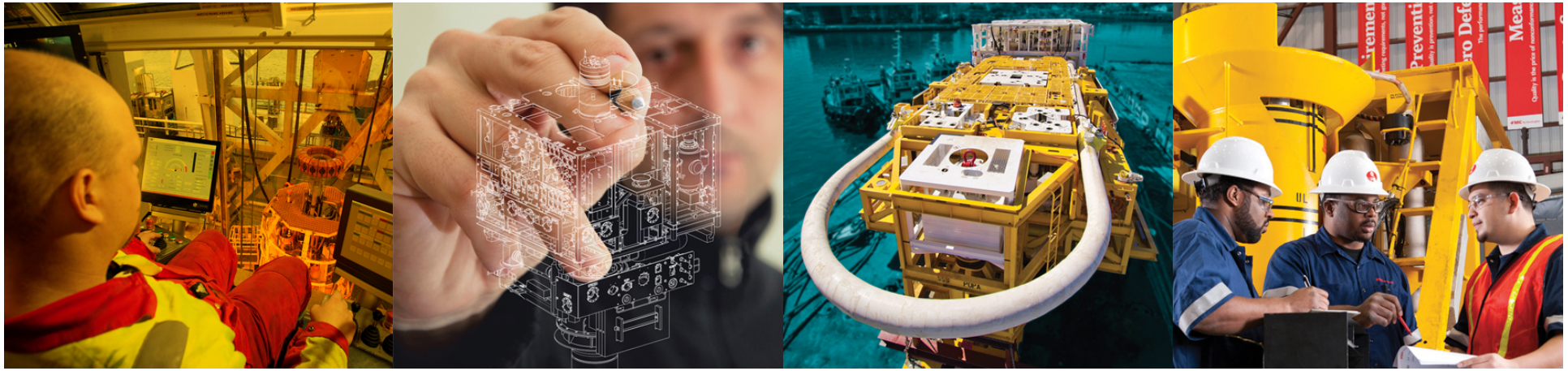
Text Analytics in Organizational Term Alignment and Knowledge Extraction – Case Pitch

Ahren E. Lehnert

8 June 2015, IKO Conference



About Ahren E. Lehnert

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Ahren is the Taxonomy & Search Analyst in the Information Management group at FMC Technologies. He has worked in taxonomy, search, and information management and has developed enterprise taxonomies in a full-time and consulting capacity in a broad range of industries.

FMC Technologies

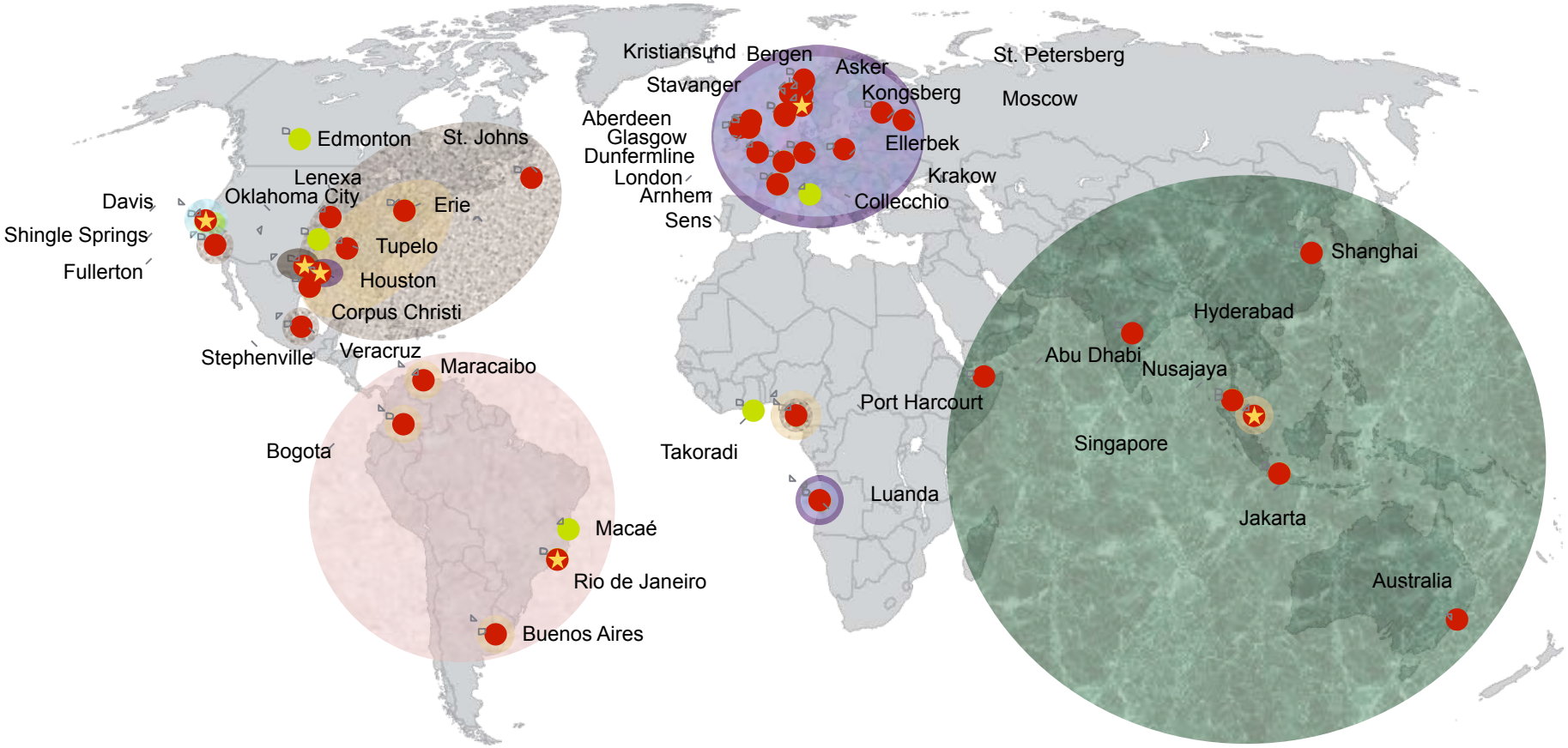
FMC Technologies

An oilfield equipment and services company

- $7.9 billion revenue in 2014
- 20,300 employees worldwide*
- 24 production facilities in 14 countries*
- Recognized by Forbes® Magazine as one of the World's Most Innovative Companies
- A recipient of the 2013 Americas Most Admired Knowledge Enterprises (MAKE) award; finalist for 2014 MAKE award

* As of December 31, 2014.

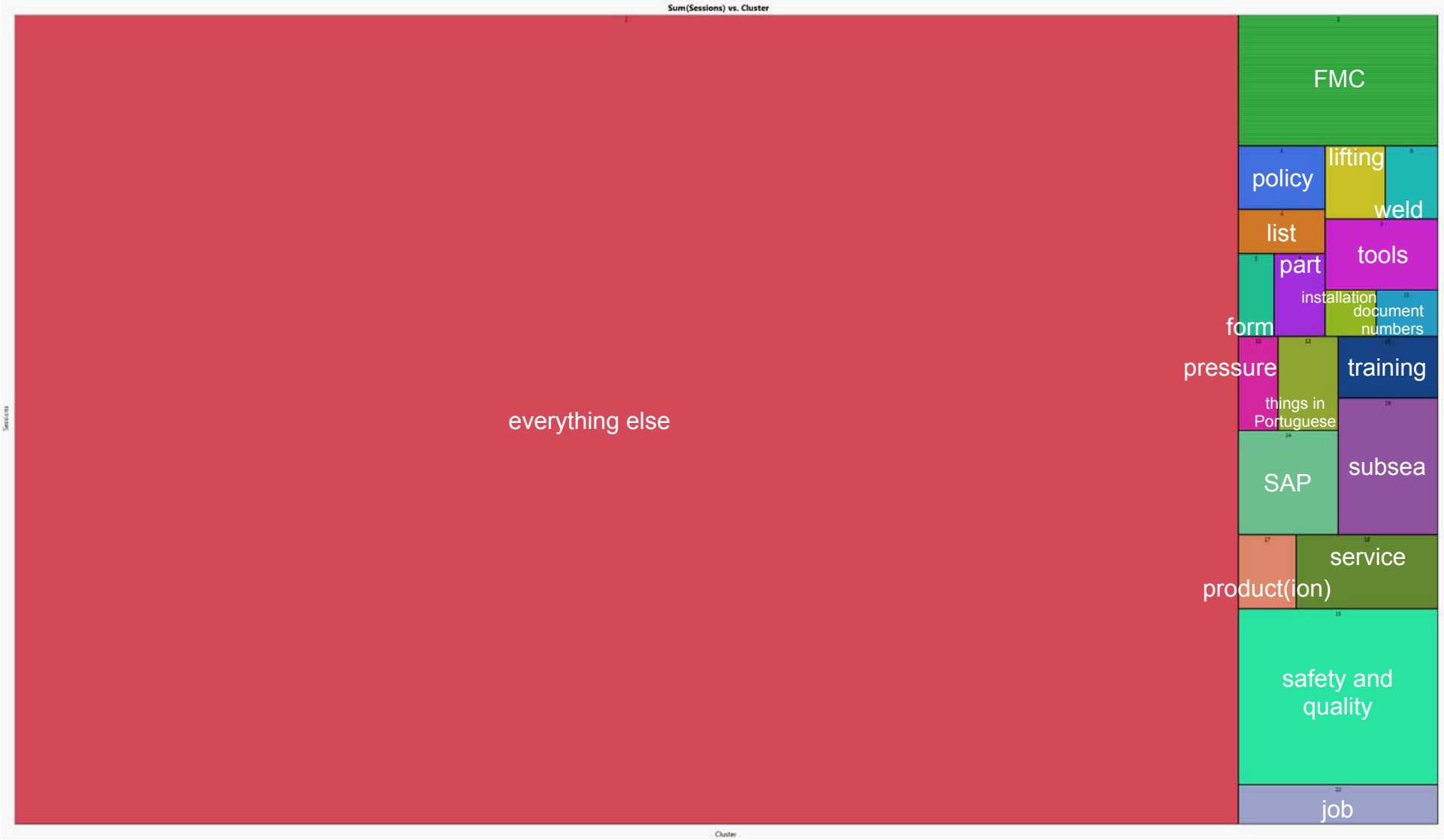
They All Talked at Once



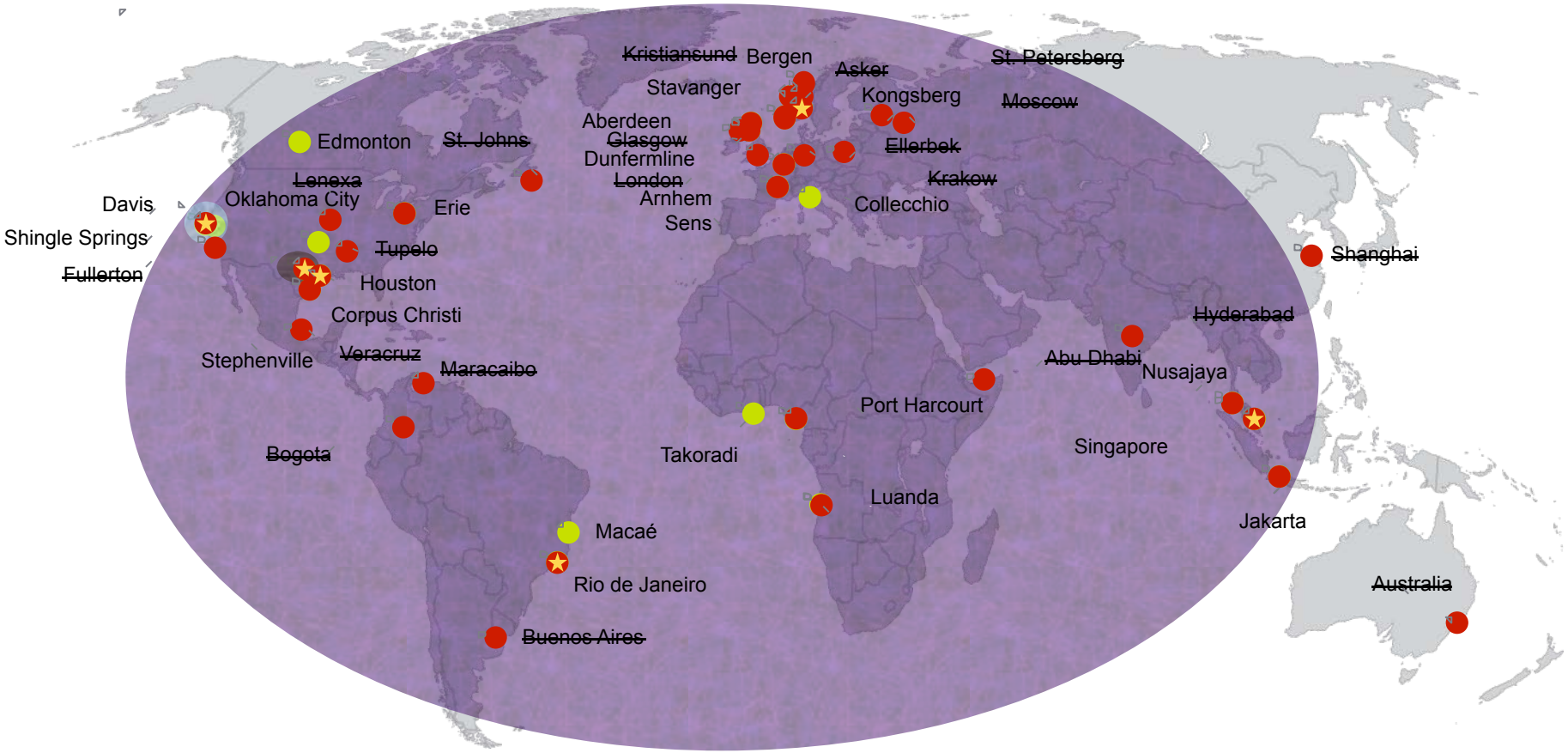
- Seven separate SharePoint Farms and nine separate search instances with no unified user experience
- No understanding of what users are looking for and no single view of search information

Intranet Locations
SharePoint Farms
Production Facilities
Corporate Headquarters
2007 Search
2010 Search (Houston)
2010 Search (Kongsberg)
2010 Search (Rio)
2010 Search (Singapore)
2013 Search (EMEA)
2013 Search (Schilling)
FAST Search

Bodiless Voices



Voices



- Single instance of 2013 SharePoint search on four of the seven SharePoint Farms
- Single FMCTI Taxonomy
- Auto-categorization of most SharePoint content

- Intranet Locations
- SharePoint Farms
- Production Facilities
- Corporate Headquarters
- 2007 Search
- ~~2010 Search (Houston)~~
- ~~2010 Search (Kongsberg)~~
- ~~2010 Search (Rio)~~
- ~~2010 Search (Singapore)~~
- 2013 Search (All)
- 2013 Search (Schilling)
- ~~FAST Search~~

Appendix: Before & After

Before	After
Six separate search instances	Single SharePoint 2013 search instance
Multiple analytics sources and reporting	Single analytics source and reporting
Auto-categorization of one SharePoint Site Collection	Auto-categorization of two of the four SharePoint farms
No search analysis	Monthly search analysis and reports
No understanding of users' search patterns	Better understanding of users' search needs