

# 1 Competitive Intelligence Analysis Tools

OSS 02  
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## 2 Overview

- Role of CI technology.
- Fuld Intelligence Software Report and technology's support of CI cycle.
- Software packages and their primary focus.
- Not everything about everyone.
  - Key concepts and technology.
  - Links for further exploration.

## 3 Speaker background

- Worked in CI at Motorola, Ameritech.
- Fellow of Society of Competitive Intelligence Professionals (SCIP) [www.scip.org](http://www.scip.org).
- Editor SCIP publications:
  - Internet CI.
  - SCIP online membership newsletter.
  - Competitive Intelligence Magazine.
  - Competitive Intelligence Review.

## 4 Intelligence Software Report 2002

- Fuld & Company review of 13 (6 new) software offerings in the CI arena.
- Full report available at [www.fuld.com](http://www.fuld.com).
- Software evaluated by intelligence cycle criteria.

## 5 CI technology

- Has been used, but not wisely.
- CI clients more comfortable with software output and 'soft' information use.
- Increased offerings driven by:
  - Potential of knowledge management market.
  - Available computing power on the desktop.
  - Interest and support of government agencies.
  - Pressure on CI departments.

## 6 ☐ Pressure on CI

- Corporate cutbacks impact on available analytical time and resources.
- Increasing market uncertainty creates higher output demand:
  - More emphasis on analytical output.
  - No more time for “Google searching.”
- Use of ad-hoc intelligence teams.

## 7 ☐ Key driver of software use

- Better workflow and efficiency in:
  - Gathering published and primary information.
  - Extracting information from documents.
  - Visualization of information relationships.
  - Collaboration tools to help ad-hoc CI teams operate from remote locations.
  - Reporting analysis through multiple communication channels.

## 8 ☐ But technology can't do analysis.

- Collects information from new information sources.
- Identifies novel linkages among larger collections of information.
- Presents new avenues of research.
- Can cut down on preparation and collection time, creating more analysis space.
- But there is no ‘analyst in a box.’

## 9 ☐ A simple analogy

- A good word processing program makes it easier to write and make revisions, and catch spelling mistakes:
  - It does not make you a better writer.
  - It doesn't affect the quality and content of the reports you write.
- CI tools can make analysis easier, but only if the process and the people are good enough to generate actionable intelligence in the first place.

## 10 ☐ Automated CI support

- Information collection: gathering raw information.
- Analysis: processing the raw information.
- Delivering targeted analysis.

## 11 ☐ Software note

- Most software used in CI was developed for larger markets.
- University computer and linguistics laboratories:
  - Create much of the new systems.
  - Establish internet applications as proof-of-concept.
  - Are eventually acquired by larger software companies.
- Government is providing the majority of new venture funding.

## 12 ☐ Information collection

- Software agents for print information retrieval.
  - Covers message boards and news groups.
  - Integrates information from diverse sources.
  - Minimizes time spent for same coverage.
  - Maximizes available analytical time.
  - Still need human gatekeeper to determine relevance to the organization and CI issue.

## 13 ☐ Analysis

- Much software simply provides different view of collected information (product comparisons).
- Rise of text mining, taxonomy, and rules-based systems to determine relationships from text.
- Primarily pre-processing, reducing documents to essential information.

## 14 ☐ Delivery

- Rise of email, internet, intranet communication.
- Provides support for analytical deliverables.
  - Launch background documents.
  - Create report templates.
  - Publish to intranet.

## 15 ☐ Evaluation points

- Multi-language support.
- Multi-format support.
- Platform.
- Integration options.
- Maintenance effort.

- Compatibility with existing corporate systems.

#### 16 Full cycle software

- Brimstone [www.brimstone.net](http://www.brimstone.net)
  - Relational database.
  - List, prioritize, track tasks.
  - Text analyzer of web-collected information.
  - Rumors/observations fields.
  - Cross-tab analysis of products.
  - Visualize relationships.
  - Build report template.

#### 17 Full cycle software

- Cipher Knowledge Works [www.cipher-sys.com](http://www.cipher-sys.com)
  - Models CI workflow.
  - Automated collection of published information.
  - Advanced search tools, integrated with subscription sources, newsfeeds.
  - Data extraction using IBM Intelligent Miner.
  - Document repository and report generation.

#### 18 Full cycle software

- Wincite Systems. [www.wincite.com](http://www.wincite.com)
  - Customizable, multi-dimensional databases.
  - Multiple source integration.
  - Strong reporting functions.
  - Web-browser report dissemination.
  - Corporate portal capability.

#### 19 Full cycle software

- Wisdom Builder [www.wisdombuilder.com](http://www.wisdombuilder.com)
  - Identification of search requirements.
  - Information search and retrieval of multiple information sources, including internal.
  - Scores search results by semantic analysis.
  - Removes duplicate articles.
  - Extracts relationships.
  - Provides report templates.

#### 20 Information collection

- Externally published material.
- Web monitoring and clipping.
- Internally published material.
- Email monitoring/ internal expert lists.
- Non-text monitoring (images, voice).

21  **Externally published**

- Commercial databases services.
- Site publishers (companies, consultants, academic, associations, etc.)
- Newswires.
- Bulletin boards, forums, Usenet groups.

22  **Web monitoring**

- Automatic tracking of changes on web sites or pages.
  - Includes message boards and usegroups.
  - Different levels and specificity of monitoring.
  - Provide changes and previous text.
  - Must specify URLs of sites/pages to be monitored.

23  **Web monitoring software**

- C-4-U Ltd. [www.c-4-u.com](http://www.c-4-u.com)
  - Lists modifications, highlights changes.
  - Works in MS Explorer navigation bar.
- Change Detection [www.changedetection.com](http://www.changedetection.com)
- Enfish Tracker Pro [www.enfish.com](http://www.enfish.com)
  - Tracks multiple pages on a site, up to five levels deep.

24  **Web monitoring software**

- InfoMinder WebMinder [www.infominder.com](http://www.infominder.com)
- NexLabs TrackEngine [www.nexlabs.com](http://www.nexlabs.com)
  - Monitors websites, chat, message boards.
  - Customize tracking parameters, keywords.
  - Change alerts sent via e-mail.
- URlywarning [www.urlywarning.com](http://www.urlywarning.com)

25  **Web clipping**

- Automatic monitoring of web publications, bulletin boards, web sites, news sources, Usenet groups, message boards, forums.
  - Search at least daily.

- Delivers only new material.
- Tracks public opinion, identifies competitor actions, monitors time-sensitive issues, tracks what is said about a company.

## 26 ☐ Web clipping services

- CyberAlert [www.cyberalert.com/](http://www.cyberalert.com/) filters and sorts information from web forums, Usenets, sites.
- Cyber Scan ClippingService [www.clippingservice.com](http://www.clippingservice.com) keywords, human filters, includes source information.
- PR Newswire Ewatch [www.ewatch.com](http://www.ewatch.com) online pubs, usenet, discussion groups, bulletin boards.

## 27 ☐ Web clipping services

- WebClipping [www.webclipping.com](http://www.webclipping.com) newspapers, magazines, radio, wires, usenet, web pages, search engines.
- CyberClipping (Luce) [www.cyberclipping.com/](http://www.cyberclipping.com/) print publications, newsgroups, TV broadcasts.
- Cyveillance [www.cyveillance.com](http://www.cyveillance.com)

## 28 ☐ Web search software

- Caesius WebQL [www.caesius.com](http://www.caesius.com)
  - Search engine, scripted searches.
  - Extracts information from identified sources; can place in spreadsheets.
  - Also searches password sites, product databases.
  - Has nine turnkey applications for message boards, patents, web sites, research and prices.

## 29 ☐ Web search software

- FirstRain Discovery [www.firstrain.com](http://www.firstrain.com)
  - Non-uniform crawls guided by the query.
  - Continuous updating of relevant information to dynamically 'correct' the crawl.
  - Categorization of retrieved information into 'snippets.'

## 30 ☐ Consumer monitoring

- Intellisseek PlanetFeedback. (In-Q-Tel) [www.planetfeedback.com](http://www.planetfeedback.com)
  - Monitors message boards, usenet groups for consumer intelligence.
  - Extracts 'nugget' information.
  - Human meta-tagging, aggregate analysis.
  - Graphical reporting structure.

31 ☐ **Internally published**

- Internal information search (databases, documents, intranet, PowerPoint, Excel).
- Interviews, field reports, customer information.

32 ☐ **Email/ internal expert lists**

- Lotus Knowledge Discovery System [www.lotus.com](http://www.lotus.com)
  - Monitors activity of documents and email.
- Tacit ESP [www.tacit.com](http://www.tacit.com) (In-Q-Tel)
  - Builds expertise profiles from documents.
- Verity K2E [www.verity.com](http://www.verity.com)
  - Identify internal subject experts based on the emails/documents they write.

33 ☐ **Non-text monitoring**

- BBN Audio Indexer [www.bbn.com](http://www.bbn.com)
  - Indexed, searchable transcriptions of audio
  - English, Spanish, Chinese, Arabic.
- Convera Screening Room [www.convera.com](http://www.convera.com)
  - Browse, search and preview video source material.

34 ☐ **Analytical pre-processing**

- Sort information by pre-defined rules.
- Display actions chronologically.
- Extract relationships.
- Visualize data relationships.
- Provide multiple viewing models.

35 ☐ **Text mining**

- Summarization.
- Extraction.
- Categorization.
- Visualization.

36  **Summarization**

- Identifies key concepts and sentences from a text document.
  - Captures key points.
  - Includes semantic analysis results.
  - Summary can be paragraph, sentence, or reduced text.
  - Core information needed for human relevance assessment is small (as much as 83% of text can be ignored).

37  **Summarization**

- Most systems include the first sentence in the text
- Evaluation of a relevant summary is very subjective.
- Users will accept and even prefer good summaries over full text documents for scanning/familiarization purposes.
- Important for hand-held devices.

38  **Summarization**

- Btextact ViewSum <http://btlabs1.labs.bt.com>
- Copernic Summarizer. [www.copernic.com](http://www.copernic.com)
- Interactive Information <http://extractor.iit.nrc.ca>
- Intext [www.intext.com](http://www.intext.com)
- Lextek Brevity. [www.lextek.com/brevity](http://www.lextek.com/brevity)
- Megaputer TextAnalyst [www.megaputer.com](http://www.megaputer.com)
- Summarist (research) U. of Southern California [www.isi.edu/natural-language/](http://www.isi.edu/natural-language/)

39  **Extraction**

- Finds and classifies key phrases in unstructured text and entered into structured representation (database).
- Uses computational linguistic and natural language processing technologies.
- Extracts people, companies, places, time.
- Can be used on live text feeds, web sites, document databases, and catalogs.

40  **Extraction**

- ClearResearch Suite [www.clearforest.com](http://www.clearforest.com)
  - Summarizes document content.
  - Extracts relationships within collected information (semantic analysis)

- Relationships (corporate, personal, technical) packaged in multiple visual maps.

#### 41 ☐ Extraction software

- AeroText (Lockheed Martin/Semio)  
<http://mds.external.lmco.com/products/gims/aero/index.html>.
- BBN Identifinder [www.bbn.com/speech/identifinder](http://www.bbn.com/speech/identifinder).
- Content Extractor [www.datajunction.com](http://www.datajunction.com).
- Insightful InFact [www.insightful.com](http://www.insightful.com).

#### 42 ☐ Extraction software

- Mohomine [www.mohomine.com](http://www.mohomine.com). (In-Q-Tel)
- NetOwl Extractor [www.netowl.com](http://www.netowl.com).
- Temis Insight Discoverer Extractor [www.temis-group.com/temis/extractor.htm](http://www.temis-group.com/temis/extractor.htm).
- WhizBang! Labs. [www.whizbang.com](http://www.whizbang.com).

#### 43 ☐ Categorization

- Automatic indexing and categorization– organizes documents into categories.
- Taxonomy templates for indexing.
  - Created by linguistic based algorithms.
  - Indexes email, web pages, document databases, Notes, etc.

#### 44 ☐ Categorization

- FireSpout [www.firespout.com](http://www.firespout.com)
  - Extract/transform/load technology from MIT.
  - Turns unstructured content to XML format.
- Quiver [www.quiver.com](http://www.quiver.com)
  - Auto-categorization with workflow management.
- SemioTagger: [www.semio.com](http://www.semio.com)
  - Includes pre-built taxonomy templates (functional and industry) for classifying and retrieving documents.
- Stratify Discovery [www.stratify.com](http://www.stratify.com)

#### 45 ☐ Visualization

- Uncovers, interprets, and displays complex information in graphical form.
- Quickly find connections between sets of information.

- Requires flexibility (customization) to be most effective.

#### 46 ☐ Visualization software

- Anarcti.ca Visual Net [www.anarcti.ca](http://www.anarcti.ca).
- Goldridge [www.goldridge.com](http://www.goldridge.com).
  - Custom charts of companies' strategic relationships, acquisitions, products.
- I2group Analyst Notebook [www.i2group.com](http://www.i2group.com).
  - Link analysis, activity charts, timelines.

#### 47 ☐ Visualization software

- Leximancer [www.leximancer.com](http://www.leximancer.com) [www.spss.com](http://www.spss.com).
- Pacific Northwest National Laboratory SPIRE [www.pnl.gov/infoviz/spire/](http://www.pnl.gov/infoviz/spire/).
- TheBrain WebBrain [www.thebrain.com](http://www.thebrain.com).
- WebMap [www.webmap.com](http://www.webmap.com).

#### 48 ☐ All three

- IBM Intelligent Miner for Text <http://www-3.ibm.com/software/data/iminer/fortext/index.html> :
  - Feature extraction, clustering, summarization, categorization.
  - Also includes text searching and web crawling.
  - Runs on Solaris and Windows NT.

#### 49 ☐ All three

- Inxight [www.inxight.com](http://www.inxight.com)
  - Automated categorization.
  - Extracting and indexing metatext.
  - Visualizing web sites for patterns and trends.
  - Summarizer.
  - Multilingual.
- Osalat (Austin Information Systems) [www.ausinfo.com/Osalat/](http://www.ausinfo.com/Osalat/)

#### 50 ☐ Analysis matrix

- Docere Intelligence [www.docere.se](http://www.docere.se)
  - Framework for collecting and organizing information.
  - Matrix identifies and reports trends and events.
  - Views of collected information.

- Report generation.

## 51 ☐ Analysis support

- Strategy Software [www.strategy-software.com](http://www.strategy-software.com)
  - Relational database tool provides structured organizational framework.
  - Collection framework for searching.
  - Comparison matrices and profiles, competitive assessment and reporting.
  - Supports finished analysis reports.

## 52 ☐ Patent analysis

- Aurigin. [www.aurigin.com](http://www.aurigin.com).
- MAPIT [www.mnis.net/mpt.html](http://www.mnis.net/mpt.html) :
  - Discovers relationships between patents or patent sets.
  - Used for portfolio management, M&A analysis, competitor portfolios.

## 53 ☐ News analysis

- NewsInEssence [www.newsinessence.com](http://www.newsinessence.com):
  - Under development by CLAIR group at University of Michigan.
  - From a 'seed' URL (news story) system searches other news sources for other stories related to same event.
  - Produces summaries of the stories.

## 54 ☐ Work to be done

- The core resource of CI is text.
- The ability to collect, filter, and analyze information determines the quality and value of CI.
- Information relevance is determined by what you already know.
- Text volume will only increase.
- Time available will stay the same.

## 55 ☐

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