



Thomson Reuters' Brain

The Egan business that was once West Publishing now supplies its parent company with the intellectual firepower to outmaneuver Bloomberg and LexisNexis.

November 2009 | by Dave Beal



CEO of Thomson Reuters Legal Peter Warwick expects to add to his already-massive Egan facilities.

Photograph by Craig Bares

There may be no more concise way to sum up the changed nature or ambitions of the former West Publishing Company than what **Roger Martin** says: "We are sort of the next generation of Google—without the garbage—for professionals."

West was the publisher of legal reference and college textbooks that had been around the Twin Cities since 1872, when John and Horatio West began selling legal compendiums and office supplies to lawyers in St. Paul. It got acquired by Thomson Corporation, a Toronto-based publisher and data-services business, in 1996. Then Thomson acquired Reuters Group, PLC, the London-based news and financial reporting company, in 2008. The two became Thomson Reuters Corporation, and what had been West became Thomson Reuters Legal.

Martin is a Thomson Reuters director and dean of the **Rotman School of Management** at the University of Toronto. He's been a champion of Thomson's West and Reuters acquisitions, which both drew criticism that Thomson was overpaying.

And Google is—need anyone say it? The name is synonymous with online search.

In 2007, Martin published an article in his business school's magazine underlining the value of Thomson's West Publishing acquisition. Bringing West into the fold had made Thomson a star of the information services field, he asserted.

Thomson Reuters still publishes hardcover law books (48 million of them last year) just as West did. But increasingly, legal professionals have come to rely on services like Westlaw, a sophisticated online database and search engine created by West Publishing, to find the precedents and statutes they need. And Westlaw has become a wellspring of related products, both for the legal field and across Thomson Reuters' other businesses in health care, science, accounting, and financial markets.

Much of Thomson Reuters' business is built on adding value to information by making it easier to find, combine, and adapt it. Increasingly, New York City-based Thomson Reuters is a technology business, run by information scientists not just experts in law or finance.

In Eagan, the company's R&D group has its home base. Some \$4 billion worth of business from Thomson Reuters' divisions hums through three massive data centers. And Peter Warwick, CEO of Thomson Reuters Legal, says there are space and plans to build more.

Artificial Intelligence

The Eagan campus employs 7,000—far more than at any other Thomson Reuters location. The company (NYSE: TRI) has offices in 100 countries and more than 50,000 employees.

Legal has a total of 15,000 people in 27 countries. It's just one of seven primary business units in the company (see sidebar), but it's a big contributor to the bottom line. In 2008, it accounted for 27 percent of Thomson Reuters' \$13.4 billion in revenue and 39 percent of its operating income. In the first quarter of 2009, the legal unit had an operating margin of 32.1 percent versus 20.7 percent for the entire company. Legal has consistently set the pace for Thomson's performance ever since the West acquisition.

But while the Eagan shop still touts the fact that 800 of its employees have law degrees, 1,400 are information technologists.

Notable among them is Peter Jackson, Thomson Reuters' chief scientist. He says the Google analogy is "a little too simple."

Jackson is an expert in artificial intelligence who heads a group of 40 similarly skilled R&D specialists in Eagan. Among his areas of expertise are information retrieval (search), document categorization (automated indexing of content), machine learning (the design of algorithms that enable software to learn from and make decisions based

on data patterns), and natural language processing (in which software can summarize content, convert computer language into human language and vice versa, or make a computer speak with human tones).

Jackson and his group have helped Thomson introduce a stream of new products and enhancements that rely on search and related technologies. His writing about one of these products in *Searcher* magazine—a 2004 rollout called ResultsPlus—is a sort of manifesto on product development.

Drawing on a well-known analogy in his field, Jackson distinguishes between a tool and an appliance: A tool requires that the user apply skill to get desired results; an appliance requires minimal user skill or interface to do its job. (An amateur jazz guitarist for some 40 years, Jackson notes that a guitar is a tool, while an amplifier is an appliance.)

Artificial intelligence “has often gone astray by embracing a kind of anthropomorphism,” Jackson writes; it tries “to build human surrogates instead of artificial helpers. In other words, scientists have concentrated upon replicating natural intelligence rather than amplifying or extending it.”

Google succeeds, he continues, because it finds “the right allocation of function between person and machine.” Results are guided largely by the user’s skill in formulating a query, but Google also compensates—by means of spelling-correction features and algorithms that weigh the popularity of sites—for slightly misdirected queries.

ResultsPlus goes even further in combining aspects of tool and appliance to aid online searchers, Jackson writes. While Westlaw does a primary search of court records and statutes based on a user query, ResultsPlus is an add-on appliance that performs a complementary search in other databases and presents secondary sources—law review articles, for example—that can round out a user’s understanding of a precedent or law.

ResultsPlus is built on machine learning and natural language processing, Jackson explains, but also central to its effectiveness is that it uses the primary search results—those guided by the user—to shape the secondary search. (The “metadata” fed into the secondary search also include “West key numbers,” the system first developed by the company in 1908 to identify and organize court cases.)

For Medical Litigator, introduced last year, Jackson’s group brought together content, ideas, and technologies from Thomson Reuters’ legal and health and science divisions. The new product also adds secondary results to primary searches (in this case, for medical terms in statutes and precedents). But Medical Litigator translates common phrases (“heart attack”) to medical terminology (“myocardial infarction”) or expands a query to cover all brand names of a drug (Ambien has equivalents called Zolpidem, Zolpimist, and Stilnoct).

With the Reuters acquisition, the R&D group finds itself working with new content and media. A product launch slated for March next year, Reuters Insider, is a “narrowcasting” television service for traders and other financial professionals. It provides live financial markets coverage, breaking news from Reuters journalists around the world, and aggregated content from other media companies. Jackson’s team added capabilities that turn audio content into searchable text

Buying Reuters has also meant that “we have a more global view now,” Jackson says. The R&D group is working on “the internationalization of artificial intelligence technology.”

In short, Reuters has added exponentially to the ways the merged company can layer together its content, media, technologies, geographies—and more acquisitions—to create new opportunities for itself.

Thomson Sells Reuters and Vice Versa

Warwick stands in the main lobby at Thomson Reuters Legal headquarters in Eagan and glances at the time—in Buenos Aires, New York, San Francisco, Tokyo, Beijing, Bangalore, London. In April 2008, after a nearly year-long acquisition process that included close antitrust scrutiny, Thomson Corporation closed on its \$17 billion purchase of Reuters Group. In an instant, Thomson, largely a North American company, had substantial assets overseas. The mindset had to become “one where global is the norm,” Warwick says. So up went the clocks.

Thomson Corporation began in 1934 with Roy Thomson buying the *Timmins* (Ontario) *Press* and later, more newspapers, broadcasters, and book and magazine publishers in Canada, the United States, and the United Kingdom. But in the ’80s, ’90s, and ’00s, it was selling off many of those interests in favor of buying collections of data and technologies for delivering them in the health care, education, financial, scientific, and legal fields. West Publishing was one of those purchases—already a major player in online legal search, but lacking resources to overtake competitor LexisNexis. Thomson brought deep pockets, but was also criticized for spending \$3.4 billion on West. The price was four times West’s annual revenues, reported to be around \$825 million.

Wall Street’s boo birds came out again when Thomson agreed to pay a 43 percent premium for Reuters. But Thomson, with products including First Call and Thomson One, had been a distant third behind Bloomberg and Reuters in the financial-information market. Buying Reuters took it up to 34 percent market share, just edging Bloomberg out of the top spot.

More important: In many respects, Thomson and Reuters were *not* direct competitors, so the merger was an opportunity to use Reuters businesses to sell Thomson products and the reverse.

The Reuters news brand will help with that. The news service provides less than 3 percent of Thomson Reuters' revenues, but that understates the power of the brand. Founded in 1851, Reuters used carrier pigeons and early telegraph cables to relay news and stock prices around Europe. Now, it has 2,700 journalists across the globe

"We're able to add Reuters news to some of our online products," Warwick says. Reuters Insider is one example, being added to existing financial products. But the company is also adding Reuters news to its Westlaw platform. And in India, where Thomson was little known, the company will leverage the familiar Reuters brand to gain a toehold for its legal products.

Thomson Reuters is in other emerging markets as well. In 2007, it bought Chinalaw.com and made it the foundation of Westlaw China. (Westlaw has more than a dozen country-specific products plus an international edition.) The service initially did searches in Chinese, but last year Westlaw China launched globally, with searches in English.

As Thomson Reuters expands in China, it will also introduce a country-specific version of its new Westlaw Business product. The company launched Westlaw Business last year, integrating Westlaw content with data on transactions (mergers, IPOs) and with tools needed for due diligence and other specialized searches.

In July this year, the company added an "Islamic Finance Centre" to Westlaw Business, to help attorneys with research for Sharia-compliant transactions. Thomson Reuters puts the size of the Islamic finance market at \$700 billion to \$1 trillion in assets with growth of 10 to 15 percent annually.

Already, Thomson Reuters gets 42 percent of its revenue from Europe, the Middle East, Africa, and Asia. Thomson got 17 percent of its revenues in those markets before the merger.

An Edge on LexisNexis?

From 2006 through 2008, Thomson, Reuters, and the merged company bought a total of 81 businesses, mainly smaller entities that got bolted onto existing businesses. Deal making continued this year. This fall, there were reports that Thomson Reuters was negotiating to buy *Businessweek* and the Breakingviews financial analysis and commentary service. The *Financial Times* reported that Thomson Reuters had agreed to buy Deloitte's London-based tax software business, Abacus Enterprise, for \$50 million, calling it one of the largest moves made by Thomson Reuters' tax and accounting division outside of the U.S.

The company's divestments have slowed, but just before it bought Reuters, Thomson sold its huge textbook publishing business for \$8.2 billion.

"They're just not emotional," Tim Casey, a securities analyst for BMO Capital Markets in Toronto, says of the Thomson family. The family's investment arm, Woodbridge Company, Ltd., holds a 55 percent stake in Thomson Reuters.

"I think that's incredibly helpful for our company," Warwick says. The Woodbridge stake means that Thomson Reuters is less vulnerable to Wall Street's pressure for short-term results, freer to build a competitive position for the long term. The company's ongoing battles with its two principal competitors—Bloomberg, L.P., the privately held financial information giant founded by Michael Bloomberg in 1981, and Reed Elsevier, a publicly held British-Dutch behemoth that owns LexisNexis—are among the more closely watched face-offs on the business scene.

Westlaw's war with LexisNexis has shifted back and forth for a generation, since a version of LexisNexis launched in 1973, two years ahead of Westlaw. Lately, the clash is tilting in Westlaw's favor.

Last January, two securities analysts for the Jefferies International investment firm in London gave Reed Elsevier's stock an "underperform" rating. They cited a loss of market share by LexisNexis to Westlaw as one reason for their negative outlook. Last year, a survey of hundreds of law firms, law schools, government agencies, and others found that two-thirds preferred Westlaw over LexisNexis.

"We were surprised by the preference for West," says Paul Lomio, director at the Stanford law library (who's been an advisor to Westlaw). "People believe in them more because they've been around so long." Many preferred Westlaw's system of head notes, summaries, and citations, carried over from West's old hard-copy law books.

Battling Bloomberg: terminals, news, and datafeeds

Information search is also the basis of Thomson Reuters' Markets businesses, but in a different sense, says the company's Scott Augustin. Traders and others want searches that run continuously and bring them corporate, economic, and political news within milliseconds of its breaking.

Both Bloomberg and Thomson Reuters sell "terminals" to financial professionals around the world—not necessarily the computer terminal itself, but the bundle of information and functions that run on it. That includes market data, analytical tools, and transaction capabilities.

Douglas Taylor, managing partner of Burton-Taylor International Consulting in Florida and a former executive for both Reuters and Thomson, says there's a striking contrast between Bloomberg's and Thomson Reuters' strategies with terminals. Bloomberg offers essentially a one-size-fits-all package, charging \$1,550 to \$1,650 a month per terminal, he says. It's won deep loyalty for that product. Thomson Reuters offers a wide variety of packages at prices ranging from a few hundred dollars to a few thousand, allowing

customers to buy only what they want. Burton-Taylor estimates terminal counts of 450,000 to 475,000 for Thomson Reuters and 265,000 to 285,000 for Bloomberg

Both companies run highly competitive global financial news services. Bloomberg has recruited a clutch of big names. One recent catch was Jane Bryant Quinn, regarded by many as the nation's premier personal finance columnist. Another was Al Hunt, a longtime star at the *Wall Street Journal*.

Reuters, which had kept a lower profile, is pushing back. Last year, it recruited Breakingnews cofounder Jonathan Ford to lead a new Reuters Commentary Service. He hired reporters, including blogger Felix Salmon, in an aggressive effort to build audience.

Then in July, Reuters' Matthew Goldstein rocked the financial world with his scoop on the arrest of a former Goldman Sachs trader for allegedly stealing the company's computer codes. The story escalated into a high-stakes controversy over the fairness of algorithmic or "high-frequency trading," which has grown so explosively that it now accounts for half the volume on the New York Stock Exchange.

Any efforts to rein in such trading would affect another financial business where Thomson Reuters and Bloomberg compete: datafeeds. Both companies feed rapidly changing streams of information into databases in customers' back offices and "black box" computerized trading devices. Mathematical analysis of the stream enables those customers to make automated trades that exploit market movements at subsecond speeds. Taylor estimates that datafeeds account for up to \$1 billion of Bloomberg's \$6.2 billion in annual revenues, and about \$3 billion at Thomson Reuters. He adds that datafeeds are a highly profitable and rapidly growing part of Thomson Reuters' business.

Despite the hammering the financial services industry has taken, Taylor expects that the financial information and analysis business will be down only 1 to 3 percent this year from 2008's nearly \$23 billion. He cites the boom in automated trading and datafeeds, a changing regulatory environment (which raises demand for data and analysis), and growth in emerging markets as reasons.

None of the datafeed business runs through Eagan. But last year, Thomson Reuters opened a new data center there, a \$50 million investment, on the strength of its businesses overall. The company posted a 6 percent gain in first-half operating profits this year and raised its dividend. Its stock has recovered from losses suffered during last fall's financial meltdown; by late summer it was flirting with 52-week highs and outperforming the market.

"We are almost certainly going to be building more data centers here," Warwick says. "We have the land and we obviously have the critical mass to do that." The 290 acres of the campus are almost all owned by Thomson Reuters and represent just over half the land the company occupies worldwide.

Given potential growth in emerging markets and more opportunities being generated by Jackson's R&D group, Warwick puts the annual revenue potential of the legal division alone at \$14.3 billion—four times Thomson Reuters Legal's revenues in 2008.

But growth will depend on how adept the company is at continuing to add value to its massive collections of data. Google searches, after all, are free; Thomson Reuters is a Google for professionals who are willing to ante up for it. As the company (and every struggling old-line media business) has discovered, information itself is merely a commodity in the information age. Information as a service—infinately searchable, sortable, and customizable—is what's in demand.

Thomson Reuters' Businesses

Thomson Reuters is organized into two divisions, markets and professional. Together, they generated \$13.4 billion in revenue in 2008. Here are the primary businesses in each division.

Markets Division: \$7.9 billion

Sales & Trading / \$3.8 billion

Information, trading, and post-trade connectivity (largely through traders' desktop terminals) for buy-side and sell-side customers in foreign exchange, fixed income, equities, and other exchange-traded instruments, and in the commodities and energy markets. Products include: 3000 Xtra, Reuters Dealing, Tradeweb

Investment & Advisory / \$2.4 billion

Information, decision support tools, and integration service for portfolio managers, wealth managers, investment bankers, research analysts, and corporate executives. Products include: Thomson One, Reuters Knowledge, Lipper, First Call, Datastream

Enterprise / \$1.3 billion

Information and software that supports business automation within the financial markets. Products include: Kondor+, RMDS, Datascope, Portia, Omgeo

Media / \$0.4 billion

Global information and news services for the world's newspapers, television and cable networks, radio stations, and Web sites. Content also provided directly to consumers

through the online, mobile, and IPTV platforms of Reuters-branded digital services.

Professional Division: \$5.5 billion

Legal / \$3.5 billion

Legal and compliance information, software, and work-flow tools for law firms, courts, government bodies, corporations, academic institutions, and other professional customers. Brands include: West, Westlaw, FindLaw, Sweet & Maxwell

Tax & Accounting / \$0.9 billion

Regulatory information, software, services, tools, and applications for tax and accounting professionals. Brands include: RIA, Checkpoint, UltraTax

Health Care and Science / \$1.1 billion

Services to support research and discovery for health care professionals, scientists, intellectual property specialists, and other professionals in the academic, pharmaceutical, corporate, and government marketplace. Brands include: Web of Knowledge, Thomson Pharma, Medstat, Solucient