



Original Results from Traditional Keyword Search Tools

Example 1a: User seeks hits related to Reagan's missile defense program (Star Wars)

When ambiguous keywords such as “star” are used, traditional keyword-based search engines typically display a mixture of relevant and irrelevant hits as shown below

Database: **Reuters 1987**

Keywords Searched: **star** – (Note: this keyword was deliberately selected to be ambiguous)

1 - article id: 10313 - high rank: 1

Reuters Topics: ACQ

ASSOCIATED NEWSPAPERS HAS 10 PCT OF NORTHERN STAR

SYDNEY, March 27 -<Northern Star Holdings Ltd> said Britain's <Associated Newspapers Holdings Plc> will hold 9.99 pct of its enlarged issued capital after applying to acquire 15.9 mln shares in its recently announced placement. Associated was one of the major investors participating in the previously reported placement of 128.9 mln shares at 3.75 dlrs each, Northern Star said in a statement. The northern New South Wales regional group is emerging as a national media force in the wake of the industry restructuring sparked by the News Corp Ltd <NCPA.S> takeover of the Herald and Weekly Times Ltd <HWTA.S> group. Associated now holds 3.3 pct of Northern Star's current issued capital, a company official said. As previously reported, Northern Star is raising 623 mln dlrs through placements and a subsequent one-for-four rights issue at 2.95 dlrs a share. Of the placements, 56.9 mln shares will go to a number of investors and 72 mln to investment group <Westfield Capital Corp Ltd>, which arranged Northern Star's purchase of News Corp's television assets, three newspapers and three radio stations for 842 mln dlrs. Westfield will increase its stake in Northern Star to about 45 pct from 20 as a result. REUTER

more like this [with](#) or [without](#) keywords

2 - article id: 17606 - high rank: 2

Reuters Topics: NOTOPICS

STAR TECHNOLOGIES NAMES NEW PRESIDENT AND CEO

STERLING, Va., June 1 -Star Technologies Inc <STRR.O> said it has appointed Robert Mathis as president and chief executive officer. Mathis, a retired four-star general with the U.S. Air Force, and formerly president of <Toomay, Mathis and Associates Inc>, replaces Herbert Shaw, who is returning to his position at <Shaw Venture Partners>, Star said. Star said Shaw will continue as Star's chairman of the board. Reuter

more like this [with](#) or [without](#) keywords

3 - article id: 17609 - high rank: 3

Reuters Topics: NOTOPICS

STAR TECHNOLOGIES <STRR.O> NAMES NEW PRESIDENT

STERLING, Va., June 1 -Star Technologies Inc said it has appointed Robert Mathis as president and chief executive officer, effective June one. Mathis, a retired four-star general with the U.S. Air Force, and formerly president of <Toomay, Mathis and Associates Inc>, replaces Herbert Shaw, who is returning to his position at <Shaw Venture Partners>, Star said. Star said Shaw will continue as Star's chairman of the board. Reuter

more like this [with](#) or [without](#) keywords

4 - article id: 19112 - high rank: 4

Reuters Topics: NOTOPICS

TRI-STAR PICTURES <TRSP.O> GRANTED RELIEF

NEW YORK, June 19 -Tri-Star Pictures Inc said it won permanent relief from various provisions of the 1952 Consent Judgment and 1980 Order that apply to the Loews' Theatre Circuit, which Tri-Star acquired last December. It said the U.S. District Court for the Southern District of New York agreed to permit exhibition of Tri-Star motion pictures in loews theaters and to allow Tri-Star to conduct its business other than with Loews free from restructions of the court's earlier orders. Reuter

more like this [with](#) or [without](#) keywords

5 - article id: 4187 - high rank: 5

Reuters Topics: NOTOPICS

CONSOLIDATED FIVE STAR RESOURCES ISSUES STOCK

EDMONTON, Alberta, March 11 -<Consolidated Five Star Resources Ltd> said it agreed to issue 1.25 mln dlrs of common stock and 10.75 mln dlrs of convertible preferred stock in a private placement. The three-year 7-1/2 pct preferred shares are convertible into common shares at 60 cts a share, and exchangeable into 1,650,000 common shares of <Cancapital Corp> owned by Consolidated Five Star. Proceeds will be used to retire bank debt, with the balance added to working capital. Consolidated Five Star previously said it borrowed 10.75 mln dlrs from a bank to acquire <Chaffinch Ltd>. Reuter

more like this [with](#) or [without](#) keywords

6 - article id: 12590 - high rank: 6



Reuters Topics: NOTOPICS

LONE STAR <LCE> FORMS JOINT VENTURE

GREENWICH, Conn., April 2 -Lone Star Industries Inc said it formed a joint venture with Monier Ltd of Australia to make and sell concrete railroad ties in North America. The equally owned venture, Lone Star Monier Concrete Tie Co, initially will operate a new Denver, Colo., plant that will make 1.75 mln ties ordered by Burlington Northern Inc <BNI>. In addition, the venture will market ties made at Lone Star's existing Massachusetts facilities. Based in Chatswood, New South Wales, Monier is a manufacturer of building and construction products and concrete ties. Reuter

[more like this](#) [with](#) or [without](#) keywords

7 - article id: 14143 - high rank: 7

Reuters Topics: NOTOPICS

LONE STAR <LCE> SEES FLAT U.S. CEMENT DEMAND

GREENWICH, Conn., April 7 -Lone Star Industries Inc expects demand for cement om the U.S. to remain in the 85-90 mln ton range through 1992, its annual report said. The company said U.S. cement consumption totaled 90.6 mln tons last year, up four pct from 1985. Lone Star also said it expects consolidation and internationalization of the U.S. cement industry to continue, adding foreign companies now own over 50 pct of U.S. capacity. Since 1974, it added, more than 30 cement plants have closed. "In our opinion, the industry's annual cement capacity today is, in reality, less than 80 mln tons" a year, it added. Lone Star said the gap between supply and demand is being filled by imported cement, which accounted for 18 pct of domestic consumption last year, up from four pct ten years ago. Reuter

[more like this](#) [with](#) or [without](#) keywords

8 - article id: 14537 - high rank: 8

Reuters Topics: SHIP

BERMUDA STAR <BSL> LEASES VESSEL

TEANECK, N.J., APRIL 7 -Bermuda Star Line Inc said it has leased a 23,500 ton passenger vessel from Orley Shipping Co Inc, of Liberia for a term with options extending for 15 years. The vessel, SS Liberte, will be renamed the Canadian Star and will be used for cruises to Montreal from New York, beginning in June. Orley SHipping is partially owned by Common Brothers PLC, a U.K. maritime firm which owns 60 pct of Bermuda Star's shares and arranged debt financing for the ship's purchase. Orley acquired the vessel from Banstead Shipping Ltd. Terms were not disclosed. Reuter

[more like this](#) [with](#) or [without](#) keywords

9 - article id: 2434 - high rank: 9

Reuters Topics: ACQ

LONE STAR<LCE> AGREES TO BUY CONCRETE OPERATIONS

GREENWICH, Conn., March 5 -Lone Star Industries Inc said it has agreed to acquire ready-mixed concrete and aggregates businesses from <Riedel International Inc> of Portland, Ore., for an undisclosed amount of cash. Lone Star's one sentence statement gave no further details and company spokesmen were not available. Reuter

[more like this](#) [with](#) or [without](#) keywords

Click here for more pages similar to this highly relevant result that contain the original keyword "star"

10 - article id: 2842 - high rank: 10

Reuters Topics: NOTOPICS

OFFICIAL SAYS REAGAN AGAINST EARLY SDI DEPLOYMENT

WASHINGTON, March 6 -A senior Defense Department official said he believed President Reagan has decided against an early deployment of the controversial anti-missile defense system known as "Star Wars." But the official, Assistant Defense Secretary Richard Perle, told a luncheon Reagan could decide within a few weeks to adopt a less restrictive interpretation of the 1972 Anti- Ballistic Missile (ABM) treaty to justify a move towards wider "Star Wars" testing and development. "I think the president has made a decision not to proceed with an early deployment of SDI," said Perle, referring to the Strategic Defense Initiative, as Reagan's antimissile project is formally called. Reuter

[more like this](#) [with](#) or [without](#) keywords

Note: When an ambiguous keyword such as "star" is selected traditional keyword-based search engines typically display a mixture of relevant and irrelevant documents. Additionally, once a relevant result has been found, traditional search engines do not usually provide users with an efficient tool to find other highly relevant documents. The results given by similar pages tools offered by other search engines, such as Google, are often inadequate since they simply retrieve additional pages, (that happen to contain the original keyword), whether or not they actually contain the same *topics* as the selected hit.

Needlebot's Similar Pages tool (with keywords) overcomes this problem by retrieving results based upon their *conceptual* similarity to the selected document. (See page 7 for Similar Pages [with](#) keywords results for hit #10 above).



Improved Results using Needlebot's Similar Pages Tool (with keywords)

Example 1b: User seeks hits related to Reagan's missile defense program (Star Wars)

Needlebot's Similar Pages tool found all six documents in the database that contain the keyword "star" and are related the Star Wars defense project and displayed them at the top of the improved results list

Database: **Reuters 1987**

Keywords Searched: **star** – followed by Similar Pages tool (with keywords) for hit #10

1 - article id: 2842 - high rank: 1

Reuters Topics: NOTOPICS

OFFICIAL SAYS REAGAN AGAINST EARLY SDI DEPLOYMENT

WASHINGTON, March 6 -A senior Defense Department official said he believed President Reagan has decided against an early deployment of the controversial anti-missile defense system known as "Star Wars." But the official, Assistant Defense Secretary Richard Perle, told a luncheon Reagan could decide within a few weeks to adopt a less restrictive interpretation of the 1972 Anti- Ballistic Missile (ABM) treaty to justify a move towards wider "Star Wars" testing and development. "I think the president has made a decision not to proceed with an early deployment of SDI," said Perle, referring to the Strategic Defense Initiative, as Reagan's anti-missile project is formally called. Reuter

more like this [with](#) or [without](#) keywords

2 - article id: 7535 - high rank: 2

Reuters Topics: NOTOPICS

U.S. SAY SOVIET UNION HAS EXCEEDED MISSILE PACT

WASHINGTON, March 19 -President Reagan accused the Soviet Union of exceeding a traditional restrictive reading of the 1972 Anti-Ballistic Missile treaty, but said the U.S. Saw no reason yet to follow suit. "We believe that the Soviet Union has been going even beyond a liberal interpretation of the treaty," he said at a news conference. There has been speculation the U.S. Administration was moving toward a looser reading of the treaty in order to permit the development of the "Star Wars" antimissile system, but Reagan said no decision has yet been made. REUTER

more like this [with](#) or [without](#) keywords

Clicking here will find additional similar pages to this hit that do not necessarily contain the keyword "star" (See page 9 for results)

3 - article id: 16550 - high rank: 3

Reuters Topics: NOTOPICS

SHULTZ BEGINS ARMS TALKS WITH SHEVARDNADZE

MOSCOW, April 13 -U.S. Secretary of State George Shultz was holding several hours of talks with Soviet Foreign Minister Eduard Shevardnadze today in pursuit of the first superpower arms control agreement in nearly a decade. Shultz, accompanied by a panoply of senior advisers and technical experts, went directly into a closed-door meeting with Shevardnadze and the Soviet delegation after arriving in Moscow from Helsinki aboard a U.S. Air Force jet. State Department spokesman Charles Redman told reporters traveling with the secretary that as the crucial talks got under way, U.S. Arms control advisers were instructed not to discuss the substance of the American proposals with the press. It has been reported previously that some of the proposals – such as those dealing with President Ronald Reagan's "Star Wars" space shield against enemy missiles -- represent a hardening of the U.S. Position. Nevertheless, U.S. Officials have been optimistic about the possibility of progress on arms control during the talks, which are scheduled to end Wednesday. Reagan, who is believed to want an agreement before he leaves office in 1989, said last week that a breakthrough on an accord eliminating intermediate-range missiles (INF) in Europe was a distinct possibility. Reuter

more like this [with](#) or [without](#) keywords

4 - article id: 14763 - high rank: 4

Reuters Topics: NOTOPICS

HOUSE COMMITTEE SLASHES "STAR WARS" FUNDING

WASHINGTON, April 7 -The House Armed Services Committee slashed President Reagan's funding request for the Strategic Defense Initiative (SDI), approving 1.7 billion dlr less than he had proposed for the anti-missile program. The committee, during its consideration of the 1988 defense authorization bill, also cut by more than half Reagan's request for a rail system for strategic missiles. The proposals must be adopted by the full House and Senate before becoming law. The committee approved 3.5 billion dlr for SDI, a land- and space-based anti-missile defense program commonly known as "Star Wars." The amount was 1.7 billion dlr less than the administration request of 5.2 billion dlr. The Reagan administration has requested a total of 312 billion dlr for defense in 1988, but congressional leaders have said that will be cut as part of a budget-trimming effort to reduce the huge federal deficit. In other action today, the committee approved



250 mln dlrs for a rail system for inter-continental ballistic missiles, but did not specify which missile system. Supporters have said missiles on such a rail network would be less vulnerable to attack than those in fixed underground silos. The administration requested 590 mln dlrs specifically for a rail-mobile system for the 10- warhead MX missile. But many congressmen, including House Armed Services Chairman Les Aspin, a Wisconsin Democrat, favor a smaller mobile missile dubbed the "Midgetman." Reuter [more like this with](#) or [without](#) keywords

5 - article id: 14754 - high rank: 5

Reuters Topics: NOTOPICS

SENATE REPORT - REAGAN PLANS EARLY SDI DEPLOYMENT

WASHINGTON, April 7 -The Reagan administration is secretly developing plans for an early deployment of President Reagan's controversial "Star Wars" anti-missile system, according to a Senate study. "Near-term deployment is an absurd and dangerous course for America," said Sen. Bennett Johnston in a statement issued with the report. "It would force us to break the bank, throw out the ABM treaty and commit us to an arms race in space." The Reagan administration is engaged in an internal debate over the Strategic Defense Initiative (SDI), as the land and space-based anti-missile system is called, and may decide later this month to reinterpret the 1972 Anti-Ballistic Missile treaty to justify an acceleration of SDI research to include development and space testing. Johnston, of Louisiana, and fellow Democrat William Proxmire of Wisconsin, whose staff prepared the report, accused the administration of covertly seeking early deployment as a political ploy to commit the United States to strategic defenses even after Reagan leaves office in 1989. "This report exposes the fact that without a presidential directive or congressional consent, the SDI program ... is being changed to pursue a near-term deployment of strategic defenses," Proxmire, chairman of the powerful Senate Appropriations Defense Subcommittee, said. "In other words, they're covertly reorienting the SDI program without congressional approval." Reuter

[more like this with](#) or [without](#) keywords

Note: By simply applying **Needlebot's Similar Pages tool (with keywords)** to the hit at position #10 in the original results list, (see page 6), we were able to retrieve all six of the highly relevant documents in the database, (five of which are shown above), related to the Star Wars project. This above example demonstrates how Needlebot's Similar Pages tool ([with](#) keywords) can help users to find multiple highly relevant results even when their original choice of keywords is not optimal.

Needlebot's Similar Pages tool (without keywords) can now be used to find additional highly relevant hits that are no longer restricted by the constraint that they must contain the keyword "**star**". In the next example, we will click on the *more the like this without keyword* link beneath hit #2, (see page 7), to retrieve additional highly relevant results that contain the same *topics* as this selected document. (See page 9).



Improved Results using Needlebot's Similar Pages Tool (without keywords)

Example 1c: User seeks hits related to Reagan's missile defense program (Star Wars)

Database: **Reuters 1987**

Keywords Searched: **star** – followed by Similar Pages tool (without keywords) on hit #2

1 - article id: 7535 - high rank: 1

Reuters Topics: NOTOPICS

U.S. SAY SOVIET UNION HAS EXCEEDED MISSILE PACT

WASHINGTON, March 19 -President Reagan accused the Soviet Union of exceeding a traditional restrictive reading of the 1972 Anti-Ballistic Missile treaty, but said the U.S. saw no reason yet to follow suit. "We believe that the Soviet Union has been going even beyond a liberal interpretation of the treaty," he said at a news conference. There has been speculation the U.S. Administration was moving toward a looser reading of the treaty in order to permit the development of the "Star Wars" anti-missile system, but Reagan said no decision has yet been made. REUTER

[more like this](#)

2 - article id: 2842 - high rank: 2

Reuters Topics: NOTOPICS

OFFICIAL SAYS REAGAN AGAINST EARLY SDI DEPLOYMENT

WASHINGTON, March 6 -A senior Defense Department official said he believed President Reagan has decided against an early deployment of the controversial anti-missile defense system known as "Star Wars." But the official, Assistant Defense Secretary Richard Perle, told a luncheon Reagan could decide within a few weeks to adopt a less restrictive interpretation of the 1972 Anti-Ballistic Missile (ABM) treaty to justify a move towards wider "Star Wars" testing and development. "I think the president has made a decision not to proceed with an early deployment of SDI," said Perle, referring to the Strategic Defense Initiative, as Reagan's antimissile project is formally called. Reuter

[more like this](#)

Hits number 3 and 4 point to the same page.

3 - article id: 2730 - high rank: 3

Reuters Topics: NOTOPICS

SOVIET NEGOTIATOR REPORTS ARMS TALKS BREAKTHROUGH

PARIS, March 6 -Chief Soviet arms negotiator Yuli Vorontsov said Soviet-American talks on cutting medium-range nuclear missiles had made a breakthrough. Vorontsov said he expected a treaty would be ready for signing within three to four months following the latest talks in Geneva. He told a news conference here "all the elements point to optimism" and only technical work on treaty language remained outstanding. REUTER

[more like this](#)

4 - article id: 2734 - high rank: 4

Reuters Topics: NOTOPICS

SOVIET NEGOTIATOR REPORTS ARMS TALKS BREAKTHROUGH

PARIS, March 6 -Chief Soviet arms negotiator Yuli Vorontsov said Soviet-American talks on cutting medium-range nuclear missiles had made a breakthrough. Vorontsov said he expected a treaty would be ready for signing within three to four months following the latest talks in Geneva. He told a news conference here "all the elements point to optimism" and only technical work on treaty language remained outstanding. Reuter

[more like this](#)

These two additional relevant hits that do not contain the word "star" were found by Needlebot's Similar Page tools (without keywords)

5 - article id: 17290 - high rank: 5

Reuters Topics: NOTOPICS

SOVIETS TO PRESENT TREATY ON MISSILES - SOURCES

GENEVA, April 27 -The Soviet Union will present a draft treaty today calling for elimination of all U.S.-Soviet medium-range missiles in Europe, an official source in the Soviet arms negotiating team told Reuters. The draft treaty will be handed over to the American team negotiating on medium-range missiles during talks at the U.S. Diplomatic mission in Geneva this afternoon, the source said. The United States presented its draft treaty, which would also scrap the so-called "Euromissiles," during a previous round of negotiations in early March. REUTER

[more like this](#)