Superconductivity Web 21



Extra May, 2002

Published by International Superconductivity Technology Center 5-34-3, Shimbashi, Minato-ku, Tokyo, Japan 105-0004 Tel.+81-3-3431-4002/ Fax+81-3-3431-4044

What's New in the World of Superconductivity in February and March

Power Applications

Intermagnetics General Corporation (February 6, 2002)

Intermagnetics General Corporation (IMGC) announced that it has completed the sale of the helium related portion of subsidiary IGC-APD Cryogenics' business for about \$10 million to to Sumitomo Heavy Industries (SHI) of Japan. The sale also includes a six-year strategic supply agreement under which Intermagnetics will purchase shield coolers it requires internally, primarily for manufacturing superconducting magnet systems for magnetic resonance imaging systems.

Glenn H. Epstein, president and CEO commented, "With the sale of the helium-based business completed at a nominal gain, and the transfer of the mixed gas technology and product lines to our new IGC-Polycold facility in Petaluma California, we remain confident that we will achieve our forecasted annual growth in earnings per share of 17 to 20 percent before giving effect to improvements from an accounting change for amortization of goodwill and gains on divestitures."

News Source:

"Intermagnetics Completes Divestiture Of Helium Refrigeration Equipment Business" (Intermagnetics General Corporation Press Release February 6, 2002)

http://www.igc.com

Netherlands Organization for Scientific Research (February 20, 2002)

Researchers from the Technology Foundation STW and the University of Twente, in cooperation with Smit Transformatoren and Smit Draad, have developed a prototype coil for a lightweight, compact superconducting transformer that is also energy-efficient. The BSCCO superconducting wires used to form the prototype coil have been insulated with a polymide-film using a newly patented method. The prototype coil also utilizes a newly developed coil winding method that involves the use of a silver casing to prevent the superconducting wires from breaking and an insulating layer to prevent damage from unwanted discharges. This method has already been implemented by companies such as American Superconductor Corporation, which sells conductors that have been insulated by Smit

Draad. The above-mentioned transformer has a wide range of potential applications, such as in trains.

News Source:

"New superconducting transformer is light and compact" Netherlands Organization for Scientific Research Press Release (February 20, 2002)

http://www.eurekalert.org/pub_releases/2002-02/nofs-nst02 2002.php

American Superconductor Corporation (February 20, 2002)

American Superconductor Corporation has received a US \$ 8 million contract from the US Navy's Office of Naval Research (ONR) to build and deliver a 6,500 horsepower (hp) HTS motor designed especially for ship propulsion. This is the fourth contract that American Superconductor has received from ONR for the development of HTS motor technology to be incorporated into future Navy electric warships. The motor being developed is an AC synchronous HTS motor that will be integrated with a commercially available power electronic drive system suitable for sea trials. The 230-rpm, 6,500-hp motor represents a ten-fold increase in torque compared to the 1,800-rpm, 5,000-hp motor built and tested by American Superconductor in 2001 and is an important milestone in the development of the 20,000-hp and 35,000-hp motors expected to be used on electric warships and large cruise and cargo ships. The motor will be delivered to the U.S. Navy in the summer of 2003, enabling sea trials by the end of that year. American Superconductor expects to be producing similar motors for commercial sale by 2004. News Source:

"American Superconductor Announces US Navy Contract to Create World's First HTS Ship Propulsion Motor"

American Superconductor Corporation Press Release (February 20, 2002)

http://www.amsuper.com/press.htm

American Superconductor Corporation (February 26, 2002)

American Superconductor Corporation and Pirelli Energy Cables and Systems have announced a new agreement that will allow American Superconductor Corporation to sell its HTS wires to other cable manufacturers around the world for power cable applications. American Superconductor and Pirelli will continue to pursue commercial HTS cable projects both in cooperation with and independent of each other. The new agreement will enable American Superconductor to significantly expand its market for HTS wires, accelerating the adoption of HTS power cables and increasing the sale of HTS wire.

American Superconductor will pay Pirelli a one-time license payment of US \$ 2.25 million plus a royalty for any wire sold to other cable manufacturers and 50,000 shares of American Superconductor common stock. The agreement discontinues Pirelli's funding of research and development conducted at American Superconductor, but Pirelli will continue to participate American Superconductor's multi-filamentary composite wire product development program until September 2003.

News Source:

"American Superconductor and Pirelli Energy Cables and Systems Update Strategic Alliance to Expand HTS Cable Market"

American Superconductor Corporation Press Release (February 26, 2002)

http://www.amsuper.com/press.htm

Intermagnetics General Corporation (March 20, 2002)

Intermagnetics General Corporation (IMGC) reported third-quarter earnings excluding one-time items increased 35 percent to \$3.9 million, or \$0.22 per diluted share, from \$2.9 million, or \$0.17 per diluted share, in the previous year. Reported net income was \$3.1 million, or \$0.18 per diluted share. Net sales for the quarter ended February 24, 2002 increased 8 percent to \$37.2 million from \$34.3 million. Excluding revenue from previously disposed businesses, sales increased 17 percent to \$35.8 million from \$30.5 million in the prior period. For the nine months of fiscal 2002, net income before one-time items increased 31 percent to \$11 million, or \$0.64 per diluted share, from \$7.7 million, or \$0.47 per diluted share a year earlier. Including all non-recurring items for the year-to-date, the company reported net income of \$17 million, or \$0.99 per diluted share. Net sales increased 18 percent to \$116 million from \$98 million for the prior-year period. Excluding revenue from previously disposed businesses, net sales for the nine months of fiscal 2002 increased 24 percent to \$107.8 million from \$86.7 million in the prior period.

Glenn H. Epstein, president and chief executive officer stated, "With the sale of the helium products business and the consolidation of our Instrumentation segment operations in California, we have positioned the company to maximize its potential for continued growth". He added "The latest moves are the culmination of a series of steps we have made over the past two-plus years that demonstrate our focus on operational efficiency, continued development of profitable products and investment in growing markets. While completing this restructuring within the Instrumentation segment, we have maintained a very solid growth rate in our core superconducting magnet business, continued to report strong overall profitability and have increased our cash position substantially. Additionally, we continue to make technical progress within our Energy Technology segment." Epstein added that MRI magnet systems sales during the third quarter increased more than 41 percent to \$27.5 million from \$19.4 million a year earlier. Overall Magnetic Resonance Imaging segment sales increased more than 30 percent to \$31.0 million from \$23.8 million. Epstein concluded, "Our outlook is encouraged by and includes the recent FDA approval of Philips' new 3.0T whole-body MRI system, which is powered by the magnet

we designed and are manufacturing for Philips."

News Source:

"Intermagnetics Q3 Net Income Increases 35% Before One-Time Items"

(Intermagnetics General Corporation Press release; March 20, 2002)

http://www.igc.com

American Superconductor Corporation (March 26, 2002)

American Superconductor Corporation announced a series of restructuring, consolidation, and cost-cutting measures intended to create a more streamlined organization and reduce the cost structure of the company as it shifts its focus from research towards the commercialization of its technology and products. The restructuring and other one-time charges will total approximately US \$ 9 - 11 million and will include severance costs related to a 25% reduction in the number of company employees, non-cash charges related to reserves for potential excess inventory, and facility and equipment write-offs. Cost savings will be used to offset the costs of restructuring (to be paid out over the next 12 months). The restructuring includes the consolidation of the company's Power Quality and Reliability business unit and its Power Electronics unit. The company has also reprioritized research and product development programs within its HTS business to lower costs and shorten the time to achieving profitability.

News Source:

"American Superconductor Announces Restructuring, Consolidation, and Cost-Cutting Measures"

American Superconductor Corporation Press Release (March 26, 2002)

http://www.amsuper.com/

NMR and MRI

Air Products and Chemicals, Inc. (March 12, 2002)

Air Products and Chemicals, Inc., has signed a 10-year supply agreement with its exclusive distributor of helium in Japan, Nippon Helium, Inc. Under the contract, Nippon Helium will serve the product requirements of customers in a variety of markets, including MRI. Nippon Helium, a joint venture of Air Water, Inc. and Mitsui and Company, Ltd., has been purchasing gaseous and liquid bulk helium from Air Products for resale in Japan since 1969. The new supply agreement is valued at more than US \$ 150 million over the supply term.

News Source:

"Air Products Signs Exclusive 10-year Agreement with Japanese Distributor to Supply Helium Requirements of MRI/Electronics/Other Markets"

Air Products and Chemicals, Inc. Press Release (March 12, 2002)

http://www.airproducts.com/corp/re1/02035.asp

U.S. Department of Energy and Pacific Northwest National Laboratory (March 28, 2002)

The Department of Energy's Pacific Northwest National Laboratory announced the arrival of the world's largest, highest-performance nuclear magnetic resonance spectrometer, a 900 MHz wide-bore system developed by Oxford Instruments and Varian, Inc. The new instrument will be used for research in chemical, physical, biological and life sciences, particularly the study of basic molecular and cellular processes, the damage and repair of DNA, disease development and protein interactions.

News Source:

"PNNL Celebrates Arrival of Powerful NMR"

Pacific Northwest National Laboratory Press Release (March 28, 2002)

http://www.eurekalert.org/pub_releases/2002-03/dnnl-pca03 2802.php

Communication

ISCO International, Inc. (February 4, 2002)

ISCO International, Inc. (ISCO) announced that its principal shareholders have committed to participate fully in the company's ongoing Shareholder Rights Offering. These principal shareholders, collectively owning approximately 67% of the outstanding shares, have agreed to exercise their pro rata share of the rights being offered, as well as to participate on a pro rata basis in the exercise of any rights not taken up by other shareholders (oversubscription rights). These commitments, whether alone or combined with subscriptions from other shareholders, ensure that the rights offering will be fully subscribed and that \$20 million will be raised.

Moreover, holders of the Company's common stock as of the close of business on Monday, January 7, 2002, the record date, received 0.37 of a right for each share of common stock they owned. The subscription price is \$0.50 per share. Holders of rights who fully exercise their initial subscription right under the offering will also be entitled to subscribe for unsubscribed shares, if available, on a pro rata basis, up to twice their initial subscription privilege. Additionally, ISCO has decided to extend the expiration of the subscription rights from February 8, 2002 to February 15, 2002, in order to allow shareholders the maximum opportunity to participate in the rights offering.

News Source:

"ISCO International Announces Major Commitments in Rights Offering; Extends Offering to February 15" (ISCO International Press Release; February 4, 2001)

http://www.iscointl.com

ISCO International Inc (February 18, 2002)

ISCO International, Inc. (ISCO) announced the expiration of its previously announced rights offering on Friday February 15, 2002 at 5:00 p.m. EST. The offering was oversubscribed, resulting in gross proceeds of

approximately \$20 million to the Company. The proceeds will be used to repay debt, for working capital, and for general corporate purposes. The rights offering involved the offer of approximately 40 million shares of newly issued common stock at \$0.50 per share. Each shareholder who exercised their basic subscription privilege will receive the number of shares for which they subscribed. Due to the exercising oversubscription, shareholders oversubscription privilege will receive a pro rata portion of the number of shares subscribed for based on the number of shares each subscriber for additional shares has purchased under the basic subscription privilege. Any excess funds received by the Company will be returned to shareholders without interest.

News Source:

"ISCO International Announces Completion of Fully-Subscribed Rights Offering" (ISCO International Inc Press Release, February 18, 2002)
http://www.iscointl.com

Superconductor Technologies Inc. (February 20, 2002)

Superconductor Technologies Inc. (STI) announced that its gross commercial product revenues for the fourth quarter 2001 were \$2.1 million, compared to \$3.5 million in the year ago period. Net commercial product revenues, for the fourth quarter 2001 were \$1.8 million, compared to \$2.4 million in the year ago period. Government contract revenues for the fourth quarter 2001 were \$1.4 million, compared to \$1.2 million in the fourth quarter ended December 31, 2000. Total net revenues for the fourth quarter 2001 were \$3.2 million, vs. \$3.7 million for the fourth quarter ended December 31, 2000. The total net loss for the quarter ended December 31, 2001 was \$5.0 million vs. a loss of \$3.5 million for the guarter ended December 31, 2000. The net loss available to common stockholders included deemed distributions to preferred stockholders and in 2000 the cumulative effect of an accounting change. As a result, the net loss attributable to common stockholders for the fourth quarter 2001 was \$5.7 million, or \$0.31 per diluted share, compared with the loss of \$14.8 million, or \$0.83 per diluted share for the year ago quarter ended December 31,

For the year ended December 31, 2001, gross commercial product revenues increased 30 percent to \$9.9 million, vs. \$7.6 million for the comparable year ago period. Net commercial product revenues for the year ended December 31, 2001 were \$7.6 million, an increase of 43 percent from \$5.3 million in the year ago period. The company recorded \$4.8 million in government contract revenues for the year ended December 31, 2001, vs. \$4.6 million for the prior year. Total net revenues for the year ended December 31, 2001 increased to \$12.4 million from \$10.0 million, up 24 percent vs. the year ago period. The total net loss for the year ended December 31, 2001 was \$17.2 million, vs. \$20.7 million in the year ended December 31 of 2000. The net loss available to common stockholders for the year ended December 31, 2001 and December 31, 2000

included deemed distributions to preferred stockholders and in 2000 the cumulative effect of an accounting change. As a result, the net loss attributable to common stockholders for the year ended December 31, 2001 was \$19.8 million, or \$1.10 per diluted share, compared to a net loss of \$33.5 million, or \$2.09 per diluted share for the year ended December 31, 2000.

The company had \$15.2 million in cash and cash equivalents, \$18.8 million in working capital, and \$510,000 in long-term debt, as of December 31, 2001. Product backlog stood at approximately \$21 million at December 31, 2001

News Source:

"Superconductor Technologies Inc. Reports Fourth Quarter And 2001 Year-End Results" (Superconductor Technologies Inc Press Release, February 20, 2002) http://www.suptech.com

Conductus (February 20, 2002)

Conductus has announced the successful completion of two corporate-sponsored urban CDMA field trials involving multiple sites with two large American wireless operators. The trials confirmed that Conductus' ClearSite Systems provide a broad range of benefits to urban networks. One of these operators projected that the ClearSite systems will increase their busy hour capacity by 15-20% while maintaining or expanding coverage and preserving their present quality of service. Coverage and service quality is expected to improve during non-busy hours. The second operator concluded that the reduction in mobile transmit power (achieved by improving base station sensitivity, reducing interference, etc.) would allow their cell sites to handle a significant increase in the number of users (15-30% more) without compromising coverage or service quality. Charles Shalvoy, President and Chief Executive Officer at Conductus, commented that "In the past, high temperature superconductor (HTS) trials have mainly focused on improving coverage in rural sites. These two trials have shown that ClearSite systems not only increase coverage, but also reduce interference and increase capacity and quality of service at busy urban cell sites in demanding environments." The successful corporate trials are expected to lead to orders from the above-mentioned operators.

News Source:

"Conductus Announces Completion of Major Urban Field Trials With Two Top 10 U.S. Wireless Carriers" (Conductus Press Release February 20, 2002)

http://www.conductus.com/pressReleases/press86.html

Conductus (February 20, 2002)

Conductus has received an order for a 3G IMT-2000 prototype HTS tower mount system from one Japanese OEM and a second order for multiple HTS 3G development filter systems from a second Japanese OEM. The two orders will be delivered during Q1 and Q2 and will include Conductus' ultra-selective advanced filter. Charles Shalvoy,

President and Chief Executive Officer at Conductus, commented that "These orders are significant, since they demonstrate we are continuing to make good progress in Japan with the major operating companies and their OEM suppliers for 3G applications.

These orders are also important since it is the first time our 50-pole equivalent filter, which we announced last summer, will be evaluated for a 3G commercial application. The prototype tower mount system is designed to provide extreme selectivity for superior rejection of out-of-band interference with very low loss. In 3G networks, these systems can potentially increase capacity, coverage, and data throughput, while maintaining high quality of service levels."

News Source:

"Conductus Receives Orders to Provide Prototype 3G Systems to Two Major Japanese OEMs" (Conductus Press Release February 20, 2002)

http://www.conductus.com/pressReleases/press85.html

Conductus (February 20, 2002)

Conductus, Inc. (CDTS) announced that revenues for the fourth quarter of 2001 were \$1,773,000, which represents an increase of 108% from the comparable period in 2000. Product revenues increased by 205% to \$598,000 compared to product revenues of \$196,000 reported for the fourth quarter of 2000. Contract revenues increased by 79% to \$1,175,000 from \$657,000 reported for the comparable period of 2000. For the year ended December 31, 2001, total revenues were \$6,624,000, which represents an increase of 228% from 2000. Product revenues for the year increased by 397% to \$2,595,000 compared to product revenues of \$522,000 reported for 2000. Contract revenues for the year increased by 169% to \$4,029,000 from \$1,496,000 reported for 2000.

Charles Shalvoy, President and Chief Executive Officer at Conductus stated that CDTS has made significant progress in both their commercial wireless and government business during 2001. He added that CDTS has:

- Successfully conducted corporate-sponsored field trials with two of the top five wireless carriers and with one of the next five largest carriers in the U.S.
- Received purchase orders from two additional major base station equipment manufacturers in Japan for next-generation ClearSite 3G systems specifically designed for OEM use.
- Expanded their manufacturing organization and facilities in order to meet their forecasted product shipment goals in 2002 and for the next few years.
- Won a number of new government contract programs during the year, which provide funding for the development of important new technologies for future government and commercial wireless products. CDTS has more than tripled their overall government business from 2000 levels.

As a result of these accomplishments during 2001, Shalvoy expected significant growth in 2002. In detail, total revenues for 2002 are expected to be in the range of \$12 million to \$15 million with product revenues expected in the range of \$8 million to \$10 million and contract revenues expected to contribute approximately \$4 million to \$5 million. Gross product margins are expected to continue to improve as product shipments increase and are expected to turn positive by late 2002. Based on current estimates, net losses for 2002 are expected to be in the range of \$14 million to \$16 million or \$0.65 to \$0.75 per basic and diluted share.

News Source:

"Conductus Reports Fourth Quarter And Year-End Results" (Conductus, Inc. Press Release, February 20, 2002)

http://www.conductus.com/

Superconductor Technologies Inc. (March 13, 2002)

Superconductor Technologies Inc. (SCON)(STI) announced it has received binding commitments totaling \$13.0 million in a new equity private placement. The transaction is expected to generate net proceeds of \$12.4 million. STI closed commitments totaling \$11.2 million on March 12, 2002 and expects to close the remaining commitment for \$1.8 million within 10 days. STI may decline to accept the additional investment if Nasdaq concludes that accepting it would require shareholder approval. In that event, the net proceeds of the transaction would be \$10.6 million.

M. Peter Thomas, STI's president and chief executive officer stated that with strong year-end 2001 backlog of \$21.0 million, STI is experiencing an exciting year of growth in 2002 and that this financing provides STI with added working capital to meet these growth requirements. He said, "As a result, we are implementing a comprehensive facility expansion. We plan to invest more than \$7.0 million to expand manufacturing space by 60 percent and, with our present SuperFilter product mix, to triple manufacturing capacity to 600 systems per quarter, easily expandable to 1,000 units per quarter. With these factory enhancements we also expect to improve direct labor efficiency by 30 percent or more this year while also adding up to 100 manufacturing employees by year end." Thomas concluded. "We believe the ability to smoothly meet demand for larger procurements of HTS filters will become an increasingly important competitive factor, and we fully expect to maintain our lead in the industry."

News Source:

"Superconductor Technologies Inc. Announces \$13 Million in Equity Funding" (Superconductor Technologies Inc. Press Release; March 13, 2002)

http://www.suptech.com

Conductus, Inc. (March 14, 2002)

Conductus, Inc., has announced that Dobson Cellular Systems Inc., a subsidiary of Dobson Communications Corporation and a leading provider of cellular phone services to rural marked in the United States, has placed a follow-on order for a minimum of 200 wireless systems. The original agreement between Conductus and Dobson was signed in 2000. Timothy Duffy, Chief Technical Officer and Senior Vice-President of Network Operations and Engineering for Dobson Communications Corporation, remarked that "ClearSite ® front end systems have brought significant technological benefits to our networks. In cell sites where we have deployed the ClearSite systems, we have seen up to 43 percent increases in minutes of use, as well as a substantial reduction in dropped calls. We are very satisfied with our investment, and plan to use the systems from this follow-on order to further deploy the technology in our networks nationwide."

News Source:

"Conductus Receives Follow-on Order From Dobson Cellular for its ClearSite ® Superconductor Systems" (Conductus, Inc. Press Release March 14, 2002) http://www.conductus.com/

Conductus, Inc. (March 18, 2002)

Conductus, Inc. announced the launch of its new ClearSite ® 2300 Metro Superconductor Front End System, designed to dramatically improve capacity, coverage, quality of service and data throughput in hostile RF environments unique to metropolitan areas. The new system was unveiled at the CTIA Wireless trade show in Orlando, Florida (March 18-20, 2002). The new system can be interfaced with all major OEM platforms. The higher levels of interference in urban environments (particularly during busy hours) lead to reductions in capacity and coverage, causing frequent dropped and blocked calls. James P. Simmons, Jr., Vice-President of Marketing for Conductus, explained "In recent extensive multi-site corporate-sponsored urban field trials with two of the top five US wireless carriers, we found that the urban RF environment is more demanding than previously expected. In response, we have significantly improved our ClearSite systems to meet the needs of busy urban networks, resulting in the ClearSite 2300 Metro Front End System." The new design utilizes thin-film superconductor filters characterized by a low distortion, high resistance to interference, superior selectivity, and low loss. As a result, the filters enable the capacity of networks to be increased, reduce interference, expand in-building and outdoor coverage, and improve the quality of service, particularly in urban environments.

News Source:

"Hostile RF Urban Environments No Match for ClearSite 2300 Metro"

Conductus, Inc. Press Release (March 18, 2002) http://www.conductus.com/

Conductus, Inc. (March 18, 2002)

Conductus, Inc. also demonstrated its most advanced thin-film superconductor filter at the CTIA Wireless trade show in Orlando, Florida (March 18-20, 2002). The filter is believed to be the world's highest performance filter for wireless applications. "We believe that (this) filter is the most selective wireless filter that has ever been reported," announced Charles Shalvoy, President and Chief Executive Officer at Conductus. "Such highly selective filters, combined with the inherent low losses of superconductors, are designed to maximize the capacity, coverage, quality of service, and data throughput of advanced wireless networks by eliminating virtually all the effects of out-of-band interfering signals." Conductus' filter uses a unique architecture to obtain the equivalent selectivity of a 50-pole filter with an in-band loss of less than 1dB.

News Source:

"Conductus to Demonstrate Ultra-high Performance Filter System at CTIA Wireless 2002" Conductus, Inc. Press Release (March 18, 2002) http://www.conductus.com/

ISCO International, Inc. (March 18, 2002)

ISCO International is expanding its adaptive notch filter (ANF ®) product platform to support network-wide deployment in urban areas. The ANF monitors and suppresses in-band interference in CDMA wireless networks; the expanded platform is capable of scanning and cleaning multiple CDMA carriers in either A-band or B-band cellular networks, allowing operators to remotely monitor and control interference levels at a large number of sites. ISCO has orders or proposals to integrate their ANF in networks in eleven different states in the U.S. and orders are expected from Mexico, Brazil, and Israel.

News Source:

"ISCO International Reports Progress in Sales of In-Band Interference Systems and Unveils Enhanced Platform to Support Networks-Wide Deployments" ISCO International, Inc. Press Release (March 18, 2002) http://www.iscointl.com/

Superconductor Technologies Inc. (March 18, 2002)

Superconductor Technologies Inc. launched two new products from their SuperPlex [™] Solutions product family at the CTIA Wireless 2002 trade show in Orlando, Florida. The new products, the SuperPlex [™]1-1900 and the HTS-Ready [™] Duplexer 850 Series HP, expand Superconductor Technologies' family of RF grooming and overlay solutions. The first orders for these new products are expected to ship as early as the second quarter of 2002. The SuperPlex

1-1900 is intended for carriers who wish to overlay a PCS network on top of an existing cellular network. The HTS-Ready Duplexer 850 Series HP provides superior duplexing functionality in the 850 MHz cellular band and represents a major increase in power handling (twice the average power handling value and four times the peak power handling value) from the standard HTS-Ready Duplexer 850 Series. Commented M. Peter Thomas, president and chief executive officer of Superconductor Technologies, "The 850 Series HP duplexer represents a best-in-class product with respect to power handling and transmission/receiving isolation. As an overlay solution, the SuperPlex 1-1900 product line is a breakthrough that provides a premium, yet extremely cost-effective, solution to a critical need facing the marketplace today."

News Source:

"Superconductor Technologies Inc. Expands SuperPlex ™ Solutions Family with Introduction of Two New Products at CTIA Wireless 2002"

Superconductor Technologies Inc. Press Release (March 18, 2002)

http://www.suptech.com/

Conductus, Inc. (March 27, 2002)

Conductus, Inc. (CDTS), announced that it has completed a \$7.3 million private placement of equity to support the commercialization of its ClearSite products for the wireless communications market.

The investors, led by Special Situations Fund, purchased 3,650,000 shares of common stock at \$2.00 per share and also received warrants to purchase an additional 1,825,000 shares of common stock at \$2.75 per share. These warrants, which do not include a "net exercise" provision, may be called by the Company if the market price of the Company's common stock exceeds \$4.75 per share for twenty consecutive trading days.

Charles Shalvoy, President and CEO of Conductus stated "I am pleased to announce the completion of this financing as it will enhance the Company's balance sheet, the proceeds from this financing will be used to accelerate our sales program aimed at winning additional deployment orders from the top 10 U.S. carriers, continue our field trial program and support the development of new wireless systems with even higher technical performance and economic benefits such as our new ClearSite 2300 Metro products. In addition, we will expand our sales organization in the U.S. and overseas, and continue the expansion of our manufacturing organization and facilities." He added that he was especially pleased to welcome Special Situations.

News Source:

"Conductus Announces \$7.3 Million Financing" (Conductus Inc. Press Release; March 27, 2002)

http://www.conductus.com/

ISCO International Reports Fiscal 2001 Full Year Results (April 1, 2002)

ISCO International, Inc. (ISCO) reported consolidated net revenues of \$1,981,000 for the year-ending December 31, 2001, versus \$496,000 during the comparable period of 2000. The consolidated net loss was \$28,190,000 for the year-ending December 31, 2001, versus \$18,796,000 during the same period of 2000. The increase in net loss was due primarily to a \$4.925 million lawsuit settlement, a restructuring charge of more than \$1 million related to the closing of the Colorado and Toronto facilities and increased legal fees.

News Source:

"ISCO International Reports Fiscal 2001 Full Year Results" (ISCO International, Inc. Press Release; April 1, 2002) http://www.iscointl.com

ISCO International, Inc. (April 1, 2002)

International, Inc. (ISCO) announced that it has added new patent infringement claims in its previously announced suit against Superconductor Technologies, Inc. ("STI") and Conductus Inc. in the Federal District Court in Delaware. The new claims allege infringement of two additional patents, which were issued on August 15, 2000 and March 20, 2001, which cover the use of a cryogenic receiver front-end ("CRFE") in a tower-mounted configuration.

Dr. George Calhoun, Chairman and CEO of ISCO stated, "A CRFE system that can be installed outdoors, on the antenna tower, is an attractive solution for operators in many markets. For years the only tower-mounted CRFE product in the industry has been our T-series platform, which has been sold in Latin America, Europe and Asia. Given that Japanese and Korean wireless carriers have generally preferred outdoor base stations, the tower-mounted application may take on added importance as those carriers roll out their 3G networks. Our competitors' recent introductions of tower-mounted products underscore the emerging importance of this market.

"STI, which is a California-based company, issued a press release last January announcing its own tower-mounted CRFE for 3G deployment. While they have tried to claim that this product is targeted to international markets, STI displayed a prototype of a tower-mounted CRFE product at the recent Cellular Telephone Industry Association Trade Show in Orlando, Florida. It is our contention that this is clear evidence of knowing infringement. We also believe that Conductus has similarly infringed these patents". He added "The idea that one can avoid infringement of a valid U.S. patent simply by targeting non-U.S. customers is illusory. The U.S. patent laws contain robust protections against this kind of end-run."

"ISCO International Expands Patent Suit Against Superconductor Technologies, Inc. and Conductus, Inc. to Include the Tower-Mounted Cryogenic Receiver Front-End System"

(ISCO International, Inc. Press Release; April 1, 2002)

http://www.iscointl.com

Basic Research

Berkeley Lab, Advanced Light Source (January 14, 2002)

Using a technique called angle-resolved photoemission spectroscopy (APRES) and undulator light from the Advanced Light Source at Berkeley Lab, an international collaboration led by Stanford University physicist Zhi-Xun Shen has identified a "kink" in the energy spectrum of low-energy electrons in three different families of copper oxide high-temperature superconductors. This kink most likely represents a coupling between an electron and a phonon. While electron-phonon coupling is known to be responsible for the mechanism of low-temperature superconductivity, this is the first direct evidence of such a phenomenon in high-temperature superconductors. The findings suggest that electron-phonon coupling plays an important role in the electron dynamics of high-temperature superconductors and should thus be included in any microscopic theory of superconductivity.

News Source:

"Getting kinky with high-temperature superconductors" (Berkeley Lab Press Release January 14, 2002) http://enews.lbl.gov/Science-Articles/Archive/ALS-kinky-conductors.html

University of Illinois at Urbana-Champaign (March 18, 2002)

Researchers at the University of Illinois at Urbana-Champaign are investigating superconducting nanowires using carbon nanotube molecules to determine how small a wire can become and still remain a superconductor. Alexey Bezryadin, a physics professor at the University of Illinois, explains that in small systems, such as ultrathin wires, phase coherence is a quantum variable that may or may not have definite values corresponding to superconducting and insulating states. In collaboration with researchers at Harvard University, Bezryadin developed a technique to create superconducting wires from fluorinated carbon nanotubes, enabling the group to study the above quantum effects. The nanotubes function as scaffolds

News Source:

upon which uniform films of a superconducting molybdenum-germanium alloy are deposited. The wires are then placed across a narrow slit in a silicon chip, enabling a voltage to be applied and the resulting current to be measured. "The molybdenum-germanium films have a sharp superconducting transition, and show no signs of granularity down to a thickness of about one nanometer," said Bezryadin. "By changing how much material is deposited, we can make wires of different diameters and study important phase transitions between superconducting and insulating states." The research is relevant to areas such as supercomputing, where the nanowires could be used to connect circuit elements.

News Source:

"Superconducting Nanowires Assist in Study of Phase Transitions"

University of Illinois at Urbana-Champaign Press Release (March 18, 2002)

http://www.eurekalert.org/pub releases/2002-03/uoia-sna03 1302.php

Organizations

University of Houston (February 1, 2002)

The Texas Center for Superconductivity at the University of Houston (TCSUH) and the Space Vacuum Epitaxy Center (SUVEC) have been combined to form a

new initiative called the Texas Center for Superconductivity and Advanced Materials. The new center intends to concentrate on the development of new technologies, the fostering of commercial ventures, and the advancement of research in the areas of superconductivity and advanced materials. The initiative is expected to produce more than US \$ 10 million annually in research funds. Arthur K. Smith, president of the University of Houston, commented that "This effort should draw more funding as the new center advances, bring new opportunities for commercial ventures, and help build economic growth in Houston, in Texas, and nationwide as the technologies that the center develops move into the private sector."

News Source:

"Research Centers Join Forces to Advance UH Research Prowess"

University of Houston Press Release (February 1, 2002) http://www.uh.edu/admin/media/nr/012002/research_center_s.htm

(Akihiko Tsutai, International Affairs Department, ISTEC)