

ISCO INTERNATIONAL INC  
Form S-3  
August 14, 2006  
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As filed with the Securities and Exchange Commission on August 14, 2006

Registration No. \_\_\_\_\_ - \_\_\_\_\_

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# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

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## FORM S-3

### REGISTRATION STATEMENT

*UNDER*

*THE SECURITIES ACT OF 1933*

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## ISCO International, Inc.

(Exact Name of Registrant as Specified in Its Charter)

**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**36-3688459**  
(IRS Employer

Identification Number)

**1001 Cambridge Drive**

**Elk Grove Village, Illinois 60007**

**(847) 391-9400**

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

**John Thode**

**Chief Executive Officer**

**ISCO International, Inc.**

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1001 Cambridge Drive

Elk Grove Village, Illinois 60007

(847) 391-9400

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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**APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC:** From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  \_\_\_\_\_

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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**CALCULATION OF REGISTRATION FEE**

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<b>Title of Shares To Be Registered</b>	<b>Amount To Be Registered</b>	<b>Proposed Maximum Aggregate Price Per Unit<sup>(1)</sup></b>	<b>Proposed Maximum Aggregate Offering Price<sup>(1)</sup></b>	<b>Amount Of Registration Fee</b>
Common Stock, \$0.001 par value	19,000,000	\$ 0.31	\$ 5,890,000	\$ 631

- (1) The amount is based on the average of the high and low prices of ISCO International's common stock on the American Stock Exchange on August 10, 2006 and is used solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended.

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*THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.*

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**The information in this prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.**

**Subject to Completion**

**Preliminary Prospectus**

**dated August 14, 2006**

**PROSPECTUS**

**19,000,000 SHARES**

**ISCO INTERNATIONAL, INC.**

**COMMON STOCK**

This prospectus relates to the resale of an aggregate of 19,000,000 shares of common stock that are issuable to the selling stockholders listed on pages 11-12 upon conversion, for both principal and interest, of 5% Senior Secured Convertible Notes due June 2010, or the Notes, we sold in a private placement with each of them pursuant to a Securities Purchase Agreement dated June 22, 2006. The principal amount of each Note is \$2,500,000, for an aggregate of \$5,000,000.

The selling stockholders, or successors-in-interest, may offer the common stock through public or private transactions, at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. We will not receive any proceeds from the sale of any of these shares by either of the selling stockholders. Other than the selling commissions and fees and stock transfer taxes, and sale of the shares of common stock, we will pay all expenses of the registration.

Our common stock is listed on the American Stock Exchange under the symbol ISO. On August 10, 2006, the reported last sale price of our common stock on the American Stock Exchange was \$0.31 per share.

Our principal offices are located at 1001 Cambridge Drive, Elk Grove Village, Illinois 60007, our telephone number is (847) 391-9400.

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**INVESTING IN OUR COMMON STOCK INVOLVES RISKS. YOU SHOULD CAREFULLY CONSIDER THE RISK FACTORS BEGINNING ON PAGE 3 OF THIS PROSPECTUS BEFORE YOU DECIDE TO INVEST.**

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Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities, or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

**The date of this prospectus is \_\_\_\_\_, 2006**

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

Because we want to provide you with more meaningful and useful information, this prospectus contains, and incorporates by reference, certain forward-looking statements that reflect our current expectations regarding our future results of operations, performance and achievements. We have tried, wherever possible, to identify these forward-looking statements by using words such as anticipates, believes, estimates, expects, plans, intends and similar expressions. These statements reflect our current beliefs and are based on information currently available to us. Accordingly, these statements are subject to certain risks, uncertainties and contingencies, including the factors set forth under the caption Risk Factors, which could cause our actual results, performance or achievements for 2006 and beyond to differ materially from those expressed in, or implied by, any of these statements. You should not place undue reliance on any forward-looking statements. Except as otherwise required by federal securities laws, we undertake no obligation to release publicly the results of any revisions to any such forward-looking statements that may be made to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events.

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**WHO WE ARE**

**Recent Events**

We develop and sell solutions designed to optimize the RF (Radio Frequency) link within wireless networks. RF link, or Radio link, is the signal between the mobile device (e.g., mobile phone) and the base station ( Link ). Reverse link is the signal from the mobile device to the base station. Forward link is the signal from the base station to the mobile device. Our array of solutions includes its ANF product line (adaptive notch filter, ANF ), the RF<sup>2</sup> product family (radio link radio frequency fidelity, RF<sup>2</sup> ), services and other solutions, all focused on optimizing RF handling in order to improve system performance and integrate disparate technologies as required by operators. The wireless telecommunications industry continues to promote data services and consolidate with an increased requirement for disparate technologies to co-exist. These are trends that we look to take advantage of with our RF management products.

In 2003 we implemented a shift from manufacturing in-house to an outsourced manufacturing model wherein we supply parts and raw materials to third parties, who then complete the products to our specifications. This system allows us to outsource procurement in the future if we choose to do so. Our products are designed for efficient production in this manner, emphasizing solid-state electronics over mechanical devices with moving parts. The decrease in cost associated with these developments, coupled with enhanced product functionality, have significantly reduced overhead costs since 2002 and allowed us to realize consistently improved margins. In addition, because we have built upon and expanded upon our earlier developed technology, based on substantial input from customers, to launch the RF<sup>2</sup> product family and consider additional solutions, we have generally controlled total research and development ( R&D ) costs.

The wireless telecommunications market has experienced significant merger activity in recent years, a trend which may continue. These activities often result in operators attempting to manage and maintain disparate technologies and spectrum assets, and the need to integrate those assets. In addition, the deployment of data applications is adding to the industry requirement to integrate disparate technologies into base stations and other fixed points of access, resulting in the need to manage multiple wireless signals and keep them from interfering with each other. We are focused on providing solutions that address these types of requirements and, as a result of this focus, we bid on substantially larger business opportunities during 2005 and 2006 than we had in recent years. These proposals often are accompanied by long approval cycles and up-front product development costs. We believe the potential benefits to outweigh these costs, and expect to continue to bid on these types of business opportunities. We also continue to pursue an increasing number of smaller projects to complement these larger opportunities.

We announced several significant events to date during 2006. For instance, in January and February 2006, we entered into employment agreements with three executive officers: an agreement with Mr. John S. Thode, to continue to serve as our President and Chief Executive Officer, an agreement with Dr. Amr Abdelmonem, to continue to act as our Executive Vice President and Chief Technology Officer, and an agreement with Mr. Frank J. Cesario, to continue to serve as our Chief Financial Officer. We also announced sales and product developments such as increased international sales and sourcing activities, the expansion of our customer base, and significant new product development including the launch of our first digital platform, the digital ANF (dANF), which is designed for use in the PCS (1900 MHz) band and can be configured for other architectures/frequencies. The second quarter of 2006 saw more than \$5 million of customer orders received a record for quarterly orders and revenue and a substantial increase over previous periods. Despite these improvements, the wireless telecommunications industry is subject to risks beyond our control that can negatively impact customer capital spending budgets (as occurred during 2003) and/or spending patterns (as occurred during 2004 and the first quarter of 2006). For these and other reasons, and despite our expectation that 2006 results will exceed 2005 results, our financial statements have been prepared assuming we will continue as a going concern.

As an after-market vendor, we have experienced uneven revenue, reflecting the buying patterns of wireless telecommunications carriers. We and other after-market vendors historically have experienced a fourth quarter effect in which operators used a disproportionately large percentage of their capital budgets at the end of their fiscal year rather than lose it going forward. More recently, as operators have embarked on significant projects such as the deployment of and upgrades to data networks, wireless operators have often reallocated funds from their voice networks to other activities, and from fiscal year planning to project planning. We have been adjusting our product line and sales strategy to try to take advantage of these trends and, thus, realize a higher, more stable revenue stream.

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As indicated above, we are also pursuing digital technologies, including the deployment of our dANF platform for PCS. We believe that by producing solutions in digital format and adding solutions for the PCS band to complement those for the traditional 850 MHz band, we will extend coverage in the wireless telecommunications realm and greatly increase our available market, both in an expanded reach in the cellular market and new opportunities in the non-cellular market.

To help finance our new product lines, in June 2006, we entered into a Securities Purchase Agreement with each of the selling stockholders, Alexander Finance, L.P., and Manchester Securities Corporation, who are affiliates of our two largest stockholders and our lenders under an existing line of credit facility pursuant to which we issued to each selling stockholder a Note, in aggregate principal amount of \$2,500,000, for an aggregate of \$5,000,000. Concurrently with the execution of the Securities Purchase Agreement, the lenders waived their right under the line of credit facility to receive the financing proceeds from the issuance of the Notes, allowing us to use the funds for product development or general working capital purposes.

## **RISK FACTORS**

*You should carefully consider the risks described below, along with the other information contained or incorporated by reference in this prospectus, before making an investment decision. The risks described below are not the only ones facing our company. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations.*

*Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment.*

*This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this prospectus.*

## **RISKS RELATED TO THE OPERATIONS AND FINANCING OF THE COMPANY**

### **We have a history of losses that raises doubts about our ability to continue as a going concern**

We were founded in October 1989 and through 1996 we were engaged principally in research and development, product testing, manufacturing, marketing and sales activities. Since 1996, we have been actively selling products to the marketplace and we continue to develop new products for sale. We have incurred net losses since inception. As of June 30, 2006, the accumulated deficit was approximately \$163 million. We have only recently begun to generate revenues from the sale of our ANF and RF<sup>2</sup> products. Accordingly, although we showed a substantial improvement in revenue in 2005 as well as the second quarter of 2006, and we have indicated the expectation of continued improvement during 2006, it is nonetheless possible that we may continue to experience net losses and cannot be certain if or when we will become profitable.

These conditions raise substantial doubt about our ability to continue as a going concern. The accompanying consolidated financial statements have been prepared assuming we will continue as a going concern and do not include any adjustments relating to the recoverability of reported assets or liabilities should we be unable to continue as a going concern.

### **If we fail to obtain necessary funds for our operations, we may be unable to maintain or improve on our technology position and unable to develop and commercialize our products**

To date, we have financed our operations primarily through public and private equity and debt financings, and most recently through several financings with affiliates of our two largest shareholders. We believe that we have



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sufficient funds to operate our business through 2006 and into 2007. Our uncommitted line of credit facility matures during August 2007, an event which will require us to have additional capital available, whether in the form of an extension of this arrangement or a new arrangement, by that date. We expect the amount payable at maturity to be approximately \$11.7 million, including principal and interest. In addition, we project increases in working capital requirements relative to those of prior years in order to pursue significant business opportunities during 2006 and beyond, and also expect to spend additional financial resources in the expansion of our business and product offering. As such, we will require additional capital prior to August 2007. We intend to look into augmenting our existing capital position by continuing to evaluate potential short-term and long-term sources of capital whether from debt, equity, hybrid, or other methods. The primary covenant in our existing debt arrangement involves the right of the lenders to receive debt repayment from the proceeds of new financing activities. This covenant may restrict our ability to apply the proceeds of a financing event toward operations until the debt is repaid in full.

Our continued existence is therefore dependent upon our continued ability to raise funds through the issuance of our equity securities or borrowings. Our plans in this regard are to obtain other debt and equity financing until such time as profitable operation and positive cash flow are achieved and maintained.

Although we believe, based on the fact that we have raised funds through sales of common stock and from borrowings over the past several years, that we will be able to secure suitable additional financing for our operations, there can be no guarantee that such financing will continue to be available on reasonable terms, or at all. As a result, there is no assurance that we will be able to continue as a going concern.

The actual amount of future funding requirements will depend on many factors, including: the amount and timing of future revenues, the level of product marketing and sales efforts to support our commercialization plans, the magnitude of research and product development programs, the ability to improve or maintain product margins, and the costs involved in protecting patents or other intellectual property.

### **We have limited experience in manufacturing, sales and marketing and dependence on third party manufacturers**

For us to be financially successful, we must either manufacture our products in substantial quantities, at acceptable costs and on a timely basis or enter into an outsourcing arrangement with a qualified manufacturer that will allow us the same. Currently, our manufacturing requirements are met by third party contract manufacturers. The efficient operation of our business will depend, in part, on our ability to have these and other companies manufacture our products in a timely manner, cost effectively and in sufficient volumes while maintaining the required quality. Any manufacturing disruption could impair our ability to fulfill orders and could cause us to lose customers.

In the event that we are unable to enter into a manufacturing arrangement on acceptable terms with a qualified manufacturer, we would have to produce our products in commercial quantities in our own facilities. Although to date we have produced limited quantities of our products for commercial installations and for use in development and customer field trial programs, production of large quantities of our products at competitive costs presents a number of technological and engineering challenges. We may be unable to manufacture such products in sufficient volume. We have limited experience in manufacturing, and substantial costs and expenses may be incurred in connection with attempts to manufacture larger quantities of our products. We may be unable to make the transition to large-scale commercial production successfully.

Our sales and marketing experience to date is very limited. We may be required to further develop our marketing and sales force in order to effectively demonstrate the advantages of our products over other products. We also may elect to enter into arrangements with third parties regarding the commercialization and marketing of our products. If we enter into such agreements or relationships, we would be substantially dependent upon the efforts of others in deriving commercial benefits from our products. We may be unable to establish adequate sales and distribution capabilities, we may be unable to enter into marketing arrangements or relationships with third parties on financially acceptable terms, and any such third party may not be successful in marketing our products. There is no guarantee that our sales and marketing efforts will be successful.

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### **Management of our growth**

Growth may cause a significant strain on our management, operational, financial and other resources. The ability to manage growth effectively may require us to implement and improve our operational, financial, manufacturing and management information systems and expand, train, manage and motivate employees. These demands may require the addition of new management personnel and the development of additional expertise by management. Any increase in resources devoted to product development and marketing and sales efforts could have an adverse effect on financial performance in future fiscal quarters. If we were to receive substantial orders, we may have to expand current facilities, which could cause an additional strain on our management personnel and development resources. The failure of the management team to effectively manage growth could have a material adverse effect on our business, operating results and financial condition.

## **RISKS RELATED TO OUR COMMON STOCK AND CHARTER PROVISIONS**

### **Volatility of common stock price**

The market price of our common stock, like that of many other high-technology companies, has fluctuated significantly and is likely to continue to fluctuate in the future. Since January 1, 1999 and through June 30, 2006, the closing price of our common stock has ranged from a low of \$0.11 per share and high of \$29.38 per share while the trading price generally ranged from a low of \$0.10 per share to a high of \$39.00 per share during this time. However, our common stock did not trade above \$0.52 per share during 2005 nor has it traded above \$0.43 per share in 2006. Announcements by us or others regarding the receipt of customer orders, quarterly variations in operating results, acquisitions or divestitures, additional equity or debt financings, results of customer field trials, scientific discoveries, technological innovations, litigation, product developments, patent or proprietary rights, government regulation and general market conditions may have a significant impact on the market price of our common stock. In addition, fluctuations in the price of our common stock could affect our ability to maintain the listing of our common stock on the American Stock Exchange.

### **Risk of dilution**

As of June 30, 2006, we had outstanding options to purchase 6.7 million shares of common stock at a weighted average exercise price of \$0.34 per share (0.1 million of which have not yet vested) issued to employees, directors and consultants pursuant to the 2003 Equity Incentive Plan and its predecessor 1993 Stock Option Plan, as amended, the merger agreement with Spectral Solutions, and individual agreements with management and directors. During December 2005, our shareholders voted to increase the number of shares reserved for issuance under the 2003 Equity Incentive Plan by 12 million, and clarified that shares allocated to the 1993 Stock Option Plan but were ultimately unused were to be available for use under the 2003 Equity Incentive Plan, up to a maximum of 5 million shares. In June 2006, our shareholders voted to increase the number of shares reserved for issuance under the 2003 Equity Incentive Plan by 6 million shares in connection with a restricted stock award to John Thode, our Chief Executive Officer. In order to attract and retain key personnel, we may issue additional securities, including stock options and grants of restricted shares, in connection with or outside our company employee benefit plans, or may lower the price of existing stock options.

The conversion of the Notes, the exercise of options and warrants for common stock and the issuance of additional shares of common stock and/or rights to purchase common stock at prices below market value would be dilutive to existing stockholders and may have an adverse effect on the market value of our common stock.

### **Concentration of our stock ownership**

At the time of this filing, officers, directors and principal stockholders (holding greater than 5% of outstanding shares) together control approximately 49% of the outstanding voting power. This number could be increased to approximately 53% upon any conversion into shares of common stock of the convertible debt held by affiliates of our two largest stockholders. Consequently, the officers, directors and principal stockholders, if they act together, would be able to exert significant influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. In addition, this concentration of ownership may delay or prevent a change of control of us, even if such a change may be in the best interests of our stockholders. The interests of these stockholders may not always coincide with our interests or the interests of other stockholders. Accordingly, these stockholders could cause us to enter into transactions or agreements that we would not otherwise consider.

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### **Certain provisions in our charter documents have an anti-takeover effect**

There exist certain mechanisms in our charter documents that may delay, defer or prevent a change of control. For instance, our Certificate of Incorporation and By-Laws provide that (i) our Board of Directors has authority to issue series of our preferred stock with such voting rights and other powers as the Board of Directors may determine and (ii) prior specified notice must be given by a stockholder making nominations to the Board of Directors or raising business matters at stockholders meetings. The effect of the anti-takeover provisions in our charter documents may be to deter business combination transactions not approved by our Board of Directors, including acquisitions that may offer a premium over market price to some or all stockholders.

### **Reporting requirements of a public company**

As a public company, we are required to comply with the reporting obligations of the Exchange Act and may be required to comply with Section 404 of the Sarbanes-Oxley Act for our fiscal year ending December 31, 2007. If we fail to comply with the reporting obligations of the Exchange Act and Section 404 of the Sarbanes-Oxley Act, or if we fail to achieve and maintain adequate internal controls over financial reporting, our business, results of operations and financial condition, and investors' confidence in us, could be materially adversely affected.

As a public company, we are required to comply with the periodic reporting obligations of the Exchange Act, including preparing annual reports, quarterly reports and current reports. Our failure to prepare and disclose this information in a timely manner could subject us to penalties under federal securities laws, expose us to lawsuits and restrict our ability to access financing. In addition, we are required under applicable law and regulations to integrate our systems of internal controls over financial reporting. We plan to evaluate our existing internal controls with respect to the standards adopted by the Public Company Accounting Oversight Board. During the course of our evaluation, we may identify areas requiring improvement and may be required to design enhanced processes and controls to address issues identified through this review. This could result in significant delays and cost to us and require us to divert substantial resources, including management time, from other activities.

## **TECHNOLOGY AND MARKET RISKS**

### **We are dependent on wireless telecommunications.**

The principal target market for our products is wireless telecommunications. The devotion of substantial resources to the wireless telecommunications market creates vulnerability to adverse changes in this market. Adverse developments in the wireless telecommunications market, which could come from a variety of sources, including future competition to our principal customers, new technologies or regulatory decisions, could affect the competitive position of wireless systems. Any adverse developments in the wireless telecommunications market may have a material adverse effect on our business, operating results and financial condition.

### **We are dependent on the enhancement of existing networks and the build-out of next-generation networks, and the capital spending patterns of wireless network operators.**

Increased sales of products are dependent on a number of factors, one of which is the build-out of next generation enabled wireless communications networks as well as enhancements of existing infrastructure. Building wireless networks is capital intensive, as is the process of upgrading existing equipment. Further, the capital spending patterns of wireless network operators is beyond management's control and depends on a variety of factors, including access to financing, the status of federal, local and foreign government regulation and deregulation, changing standards for wireless technology, the overall demand for wireless services, competitive pressures and general economic conditions. The build-out of next-generation networks may take years to complete. The magnitude and timing of capital spending by these operators for constructing, rebuilding or upgrading their systems significantly impacts the demand for our products. Any decrease or delay in capital spending patterns in the wireless communication industry, whether because of a general business slowdown or a reevaluation of the prospective demand for data and other services, would delay the build-out of these networks and may significantly harm business prospects.

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### **Our success depends on the market's acceptance of our products.**

Our RF products, including our ANF and RF<sup>2</sup> products, have not been sold in very large quantities and a sufficient market may not develop for these products. Customers establish demanding specifications for performance, and although we believe we have met or exceeded these specifications to date, there is no guarantee that the wireless service providers will elect to use these solutions to solve their wireless network problems. Although we enjoyed substantial revenue growth in 2005, including the best four revenue quarters in our history, there is no assurance that we will continue to receive orders from these customers.

### **Rapid technological change and future competitive technologies could negatively affect our operations.**

The field of telecommunications is characterized by rapidly advancing technology. Our success will depend in large part upon our ability to keep pace with advancing our high performance RF technology and efficient, readily available low cost materials technologies. Rapid changes have occurred, and are likely to continue to occur, in the development of wireless telecommunications. Development efforts may be rendered obsolete by the adoption of alternative solutions to current wireless operator problems or by technological advances made by others.

## **BUSINESS RISKS**

### **Dependence on a limited number of customers**

Sales to three of our customers accounted for 98%, 97% and 94% of our total revenues for the first six months of 2006, 2005 and 2004, respectively. During 2005, the top three customers were Verizon Wireless, Alltel Corporation, and Bluegrass Cellular Corporation, respectively. In addition, a significant amount of our technical, managerial and working capital resources have been focused on working with these and a limited number of other operators and OEMs. Sales, in dollars, to non- top three customers during 2005 was roughly twice the 2004 amount, reflecting a continued expansion in customer base.

We expect that if our products achieve market acceptance, a limited number of wireless service providers and OEMs will account for a substantial portion of revenue during any period. Sales of many of our products depend in significant part upon the decisions of prospective and current customers to adopt and expand their use of these products. Wireless service providers, wireless equipment OEMs and our other customers are significantly larger than we are, and are able to exert a high degree of influence over us. Customers' orders are affected by a variety of factors such as new product introductions, regulatory approvals, end user demand for wireless services, customer budgeting cycles, inventory levels, customer integration requirements, competitive conditions and general economic conditions. The failure to attract new customers would have a material adverse effect on our business, operating results and financial condition.

### **We have lengthy sales cycles**

Prior to selling products to customers, we may be required to undergo lengthy approval and purchase processes. Technical and business evaluation by potential customers can take up to a year or more for products based on new technologies. The length of the approval process is affected by a number of factors, including, among others, the complexity of the product involved, priorities of the customers, budgets and regulatory issues affecting customers. We may not obtain the necessary approvals or ensuing sales of such products may not occur. The length of customers' approval process or delays could make our quarterly revenues and earnings inconsistent and difficult to trend.

### **We are dependant on limited sources of supply**

Certain parts and components used in our RF products are only available from a limited number of sources. Our reliance on these limited source suppliers exposes us to certain risks and uncertainties, including the possibility

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of a shortage or discontinuation of certain key components and reduced control over delivery schedules, manufacturing capabilities, quality and costs. Any reduced availability of such parts or components when required could materially impair the ability to manufacture and deliver products on a timely basis and result in the cancellation of orders, which could have a material adverse effect on our business, operating results and financial condition.

In addition, the purchase of certain key components involves long lead times and, in the event of unanticipated increases in demand for our products, we may be unable to manufacture products in quantities sufficient to meet customers' demand in any particular period. We have few guaranteed supply arrangements with our limited source suppliers, do not maintain an extensive inventory of parts or components, and customarily purchase parts and components pursuant to actual or anticipated purchase orders placed from time to time in the ordinary course of business.

Related to this topic, we produce substantially all of our products through third-party contract manufacturers. Like raw materials, the elimination of any of these entities or delays in the fulfillment process, for whatever reason, may impact our ability to fulfill customer orders on a timely basis and may have a material adverse effect on our business, operating results, or financial condition.

To satisfy customer requirements, we may be required to stock certain long lead-time parts and/or finished product in anticipation of future orders, or otherwise commit funds toward future purchase. The failure of such orders to materialize as forecasted could limit resources available for other important purposes or accelerate the requirement for additional funds. In addition, such excess inventory could become obsolete, which would adversely affect financial performance. Business disruption, production shortfalls or financial difficulties of a limited source supplier could materially and adversely affect us by increasing product costs or reducing or eliminating the availability of such parts or components. In such events, the inability to develop alternative sources of supply quickly and on a cost-effective basis could materially impair the ability to manufacture and deliver products on a timely basis and could have a material adverse effect on our business, operating results and financial condition.

### **Dependence on key personnel**

Our success will depend in large part upon our ability to attract and retain highly qualified management, engineering, manufacturing, marketing, sales and R&D personnel. Due to the specialized nature of our business, it may be difficult to locate and hire qualified personnel. The loss of services of one of our executive officers or other key personnel, or the failure to attract and retain other executive officers or key personnel, could have a material adverse effect on our business, operating results and financial condition.

### **Failure of products to perform properly might result in significant warranty expenses.**

In general, our products carry a warranty of one or two years, limited to replacement of the product or refund of the cost of the product. In addition, we offer our customers extended warranties. Repeated or widespread quality problems could result in significant warranty expenses and/or the loss of customer confidence. The occurrence of such quality problems could have a material adverse effect on our business, operating results and financial condition.

### **Intense competition, and increasing consolidation in our industry could create stronger competitors and harm the business.**

The wireless telecommunications equipment market is very competitive. Many of these companies have substantially greater financial resources, larger research and development staffs and greater manufacturing and marketing capabilities than we do. Our products compete directly with products that use similar as well as alternative technologies. Our products compete indirectly when potential customers employ systems that in some fashion address problems that are addressed by our products. Other emerging wireless technologies may also provide protection from RF interference and offer enhanced range to wireless communication service providers, potentially at lower prices and/or superior performance, and may therefore compete with our products. High performance RF solutions may not become a preferred technology to address the needs of wireless communication service providers.

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Failure of our products to improve performance sufficiently, reliably, or at an acceptable price or to achieve commercial acceptance or otherwise compete with existing and new technologies, would have a material adverse effect on our business, operating results and financial condition.

### **LEGAL RISKS**

#### **Intellectual Property and Patents**

Our success will depend in part on our ability to obtain patent protection for our products and processes, to preserve trade secrets and to operate without infringing upon the patent or other proprietary rights of others and without breaching or otherwise losing rights in the technology licenses upon which any of our products are based. We have applied for patents for inventions developed internally and acquired patent rights in connection with prior acquisitions. We believe third parties hold a large number of patents and patent applications covering RF products and other products and technologies that we are pursuing. The patent positions of companies using RF technologies, including us, are uncertain and involve complex legal and factual questions. The patent applications filed by us or others may not result in issued patents or the scope and breadth of any claims allowed in any patents issued to us or others may not exclude competitors or provide competitive advantages. In addition, patents issued to us, our subsidiaries or others may not be held valid if subsequently challenged or others may claim rights in the patents and other proprietary technologies owned or licensed by us. Others may have developed or may in the future develop similar products or technologies without violating any of our proprietary rights. Furthermore, the loss of any license to technology that we might acquire in the future may have a material adverse effect on our business, operating results and financial condition.

The U.S. Government has the right to require us to grant licenses (including exclusive licenses) under such patents and patent applications or other inventions to third parties in certain instances.

Older patent applications in the U.S. are currently maintained in secrecy until patents are issued. In foreign countries and for newer U.S. patent applications, this secrecy is maintained for a period of time after filing. Accordingly, publication of discoveries in the scientific literature or of patents themselves or laying open of patent applications in foreign countries or for newer U.S. patent applications tends to lag behind actual discoveries and filing of related patent applications. Due to this factor and the large number of patents and patent applications related to RF materials and technologies, and other products and technologies that we are pursuing, comprehensive patent searches and analyses associated with RF technologies and other products and technologies that we are pursuing are often impractical or not cost-effective. As a result, we may not have fully evaluated the patentability of the claims in our patent applications or whether materials or processes used by us for our planned products infringe or will infringe upon existing technologies described in U.S. patents or may infringe upon claims in patent applications made available in the future. Because of the volume of patents issued and patent applications filed relating to RF technologies and other products and technologies that we are pursuing, we believe there is a significant risk that current and potential competitors and other third-parties have filed or will file patent applications for, or have obtained or will obtain, patents or other proprietary rights relating to materials, products or processes used or proposed to be used by us. In any such case, to avoid infringement, we would have to either license such technologies or design around any such patents. We may be unable to obtain licenses to such technologies or, if obtainable, such licenses may not be available on terms acceptable to us or we may be unable to successfully design around these third-party patents.

Our participation in litigation or patent office proceedings in the U.S. or other countries to enforce patents issued or licensed to us, to defend against infringement claims made by others or to determine the ownership, scope or validity of the proprietary rights of us and others, could result in substantial cost to, and diversion of effort by, us. The parties to such litigation may be larger, better capitalized than we are and better able to support the cost of litigation. An adverse outcome in any such proceedings could subject us to significant liabilities to third parties, require us to seek licenses from third parties and/or require us to cease using certain technologies, any of which could have a material adverse effect on our business, operating results and financial condition.

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### **Litigation**

We have no active lawsuits, nor any pending to the best of our knowledge. If we are not successful in defending against whatever claims and charges may be made against us in the future, there may be a material adverse effect on our business, operating results and financial condition.

### **Government Regulations**

Although we believe that our wireless telecommunications products themselves are not subject to licensing by, or approval requirements of, the FCC, the operation of base stations is subject to FCC licensing and the radio equipment into which our products would be incorporated is subject to FCC approval. Base stations and the equipment marketed for use therein must meet specified technical standards. The ability to sell our wireless telecommunications products is dependent on the ability of wireless base station equipment manufacturers and wireless base station operators to obtain and retain the necessary FCC approvals and licenses. In order for them to be acceptable to base station equipment manufacturers and to base station operators, the characteristics, quality and reliability of our base station products must enable them to meet FCC technical standards. We may be subject to similar regulations of foreign governments. Any failure to meet such standards or delays by base station equipment manufacturers and wireless base station operators in obtaining the necessary approvals or licenses could have a material adverse effect on our business, operating results and financial condition. In addition, certain RF filters are on the U.S. Department of Commerce's export regulation list. Therefore, exportation of such RF filters to certain countries may be restricted or subject to export licenses.

We are subject to governmental labor, safety and discrimination laws and regulations with substantial penalties for violations. In addition, employees and others may bring suit against us for perceived violations of such laws and regulations. Defending against such complaints could result in significant legal costs for us. Although we endeavor to comply with all applicable laws and regulations, we may be the subject of complaints in the future, which could have a material adverse effect on our business, operating results and financial condition.

### **Environmental Liability**

Certain hazardous materials may be used in research, development and to the extent of any manufacturing operations. As a result, we are subject to stringent federal, state and local regulations governing the storage, use and disposal of such materials. It is possible that current or future laws and regulations could require us to make substantial expenditures for preventive or remedial action, reduction of chemical exposure, or waste treatment or disposal. We believe we are in material compliance with all environmental regulations and to date have not had to incur significant expenditures for preventive or remedial action with respect to the use of hazardous materials.

However, our operations, business or assets could be materially and adversely affected by the interpretation and enforcement of current or future environmental laws and regulations. In addition, although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, there is the risk of accidental contamination or injury from these materials. In the event of an accident, we could be held liable for any damages that result. Furthermore, the use and disposal of hazardous materials involves the risk that we could incur substantial expenditures for such preventive or remedial actions. The liability in the event of an accident or the costs of such actions could exceed available resources or otherwise have a material adverse effect on the business, results of operations and financial condition. We carry property and worker's compensation insurances in full force and effect through nationally known carriers which include pollution cleanup or removal and medical claims for industrial incidents.

## **RISKS RELATED TO ACQUISITIONS AND BUSINESS EXPANSION**

### **Risks of future acquisitions**

In the future, we may pursue acquisitions to obtain products, services and technologies that we believe will complement or enhance our current product or services offerings. At present, no agreements or other arrangements exist with respect to any such acquisition. An acquisition may not produce the revenue, earnings or business synergies as anticipated and may attach significant unforeseen liabilities, and an acquired product, service or technology might not perform as expected. If an acquisition is pursued, our management could spend a significant

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amount of time and effort in identifying and completing the acquisition and may be distracted from the operations of the business. In addition, management would probably have to devote a significant amount of resources toward integrating the acquired business with the existing business, and that integration may not be successful.

### **International operations**

We are in discussions and have agreements in place with companies in non-U.S. markets to form manufacturing, product development joint ventures and other marketing, distribution or consulting arrangements. We also have agreements with foreign entities for international distribution as well as foreign sources of components to be used in North America. These agreements and relationships help us optimize our competitive position and cost structure. There are many such entities that exist, domestically and internationally, that offer similar capabilities, and thus could reduce risk exposure to the loss of such foreign entities.

We believe that non-U.S. markets could provide a substantial source of revenue in the future. However, there are certain risks applicable to doing business in foreign markets that are not applicable to companies doing business solely in the U.S. For example, we may be subject to risks related to fluctuations in the exchange rate between the U.S. dollar and foreign currencies in countries in which we do business. In addition, we may be subject to the additional laws and regulations of these foreign jurisdictions, some of which might be substantially more restrictive than similar U.S. ones. Foreign jurisdictions may also provide less patent protection than is available in the U.S., and we may be less able to protect our intellectual property from misappropriation and infringement in these foreign markets.

### **USE OF PROCEEDS**

We will not receive any proceeds from the sale by the selling stockholders of our common stock. The selling stockholders will receive all of the net proceeds from the sale of the shares.

### **SELLING STOCKHOLDERS**

The 19,000,000 shares of our common stock registered for public resale pursuant to this prospectus and listed under the column **Number of Shares Being Offered** includes shares issuable upon conversion, for both principal and interest, of the Notes in principal amount of \$2,500,000 each or an aggregate of \$5,000,000 that we sold in a private place placement with each of the selling stockholders to finance product development and general working capital purposes. We are required to keep each registration statement relating to the shares effective until the earlier of (a) the date on which all the holders of the registered shares have completed the sales or distribution of such shares or, (b) until such shares may be sold by such holders under Rule 144(k) (provided that our transfer agent has accepted an instruction from us to such effect).

Messrs. Dan Gropper and Mark Brodsky, both former directors of our company, provided management services with Elliott Associates, L.P. and Elliott International, L.P. within the past three years. Mr. Gropper served as a director on our board from April 2002 until December 2003. Mr. Mark Brodsky served as a director on our board from June 1998 until March 1999 and again from November 1999 until August 2003. Neither individual is associated with our company today, nor to the best of our knowledge, Elliott Associates, L.P. or Elliott International, L.P.

The shares listed under the column **Number of Shares Being Offered** represents the number of shares that may be sold by each selling stockholder pursuant to this prospectus. Pursuant to Rule 416 under the Securities Act, the registration statement of which this prospectus is a part also covers any additional shares of our common stock which become issuable in connection with such shares because of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of outstanding shares of our common stock

We do not know when or in what amounts the selling stockholders may offer shares for sale. The selling stockholders may or may not sell all or any of the shares offered by this prospectus. We may amend or supplement this prospectus from time to time to update the disclosure set forth herein. Because the selling stockholders may



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offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares that will be held by the selling stockholders after completion of the offering, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.

The following table sets forth, to our knowledge, certain information regarding the beneficial ownership of the shares of common stock held by the selling stockholders as of the date hereof. We have assumed that each selling stockholder is issued the maximum number of shares of common stock issuable upon conversion of the Notes. Beneficial ownership is calculated based upon Securities and Exchange Commission requirements and is not necessarily indicative of beneficial ownership for any other purpose. Unless otherwise indicated below, the selling stockholders named in this table have sole voting and investment power with respect to all of their respective shares beneficially owned. The presentation is based on 185,962,034 shares of our common stock outstanding as of August 1, 2006:

Name of Selling Stockholders <sup>(1)</sup>	Shares Beneficially Owned Prior to Offering		Number of Shares Being Offered	Shares Beneficially Owned After Offering	
	Number	Percentage		Number	Percentage
Alexander Finance L.P.	53,398,179 <sup>(2)</sup>	27%	9,500,000	43,898,179	22%
Manchester Securities Corporation	44,761,327 <sup>(3)</sup>	23%	9,500,000	35,261,327	18%

- (1) Includes all affiliates, limited partners, donees and pledgees selling shares that are received from a named selling stockholder.
- (2) The 53,398,179 shares include 9.5 million shares covered by the registration statement, of which this prospectus is a part, the maximum number of shares of common stock issuable upon conversion of the Note held by Alexander Finance L.P. That figure is comprised of approximately 7.6 million shares issuable upon the conversion of principal, 1.7 million shares of common stock issuable for accrued interest if the Note is held through its full term, and an additional 0.2 million shares registered to address potential anti-dilution adjustments the may or may not occur in the future during the four year term of the Note. As of August 1, 2006, the Note would be convertible to approximately 7.6 million shares of our common stock.
- (3) The 44,761,327 shares include (a) shares held by Elliott Associates, L.P. and Elliott International, L.P. and (b) 9.5 million shares covered by the registration statement, of which this prospectus is a part, the maximum number of shares of common stock issuable upon conversion of the Note held by Manchester Securities Corporation. That figure is comprised of approximately 7.6 million shares issuable upon the conversion of principal, 1.7 million shares of common stock issuable for accrued interest if the Note is held through its full term, and an additional 0.2 million shares registered to address potential anti-dilution adjustments the may or may not occur in the future during the four year term of the Note. As of August 1, 2006, the Note would be convertible to approximately 7.6 million shares of our common stock.

We prepared this table based on the information supplied to us by the selling stockholders named in the table.

*Line of Credit Financing*

During October 2002, we entered into an uncommitted line of credit with each of the selling stockholders, Alexander Finance, L.P., and Manchester Securities Corporation, who are affiliates of our two largest stockholders. This line provided up to \$4 million to be borrowed by us, and we borrowed \$1 million during October 2002 upon completion of the transaction. \$1 million was borrowed during November 2002 and a third borrowing of \$1 million occurred in March 2003. This line is uncommitted, such that each new borrowing under the facility is subject to the approval of the lenders.

Borrowings on this line bore an initial interest rate of 9.5% and are collateralized by all our assets. Outstanding loans under this agreement are required to be repaid on a priority basis should we receive new funding from other sources. Additionally, the lenders were entitled to receive warrants to the extent funds are drawn down on the line. The warrants bore a strike price of \$0.20 per share of common stock and expire on April 15, 2004. The credit line was to mature and be due, including accrued interest thereon, on March 31, 2004. Warrants to purchase

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10 million shares of common stock were issued in connection with the borrowings under the line of credit during the year ended December 31, 2002. No other warrants were issued in connection with March 2003 borrowing under the line of credit.

On October 24, 2003, we and the lenders amended the terms of the line of credit agreement to reflect: (i) an increase in the aggregate commitment of the lenders to from \$4,000,000 to \$6,000,000; (ii) the elimination of warrant issuances from future drawdowns; (iii) interest on future loans would bear interest at the rate of 14% per annum; (iv) that future loans mature on October 31, 2004; (v) and that future loans be subject to the discretion of the lenders. We borrowed \$1,000,000 from the line of credit agreement upon execution of the amendment. During February 2004, the lenders exercised all of their warrants, purchasing 10,000,000 shares of common stock. We received the \$2,000,000 aggregate strike price for the exercise of these warrants.

During July 2004, we and our lenders agreed to increase the aggregate loan commitments under the credit line from \$6,000,000 to \$6,500,000. Simultaneously, we drew the remaining \$1,500,000 of the financing.

During November 2004, we and our lenders agreed to increase the line of credit to up to an additional \$2 million to an aggregate loan commitment of \$8,500,000, \$1 million of which was drawn immediately by us with the remaining \$1 million available to be drawn upon our request and subject to the approval of the lenders. The remaining \$1 million was subsequently drawn down in January 2005.

During February 2005, the consolidated credit line was extended until April 1, 2006. Interest during the extension period is to be charged at 9%.

During July 2005 we issued and sold in a private placement to affiliates of our lenders 20,000,000 shares of common stock for at a per share price of \$0.22, or an aggregate of \$4,400,000 in proceeds to us. In connection with this financing, the lenders agreed to extend the maturity date of the credit line until August 1, 2007 and to waive the provision of the current loan agreement whereby they would be entitled to receive the proceeds of any issuance of capital stock to prepay the outstanding debt. Pursuant to the provisions of Section 16(b) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, these entities also remitted approximately \$0.6 million in profits from sales of Company common stock during the six months preceding this financing.

### *Convertible Debt*

During June 2006, we entered into a Securities Purchase Agreement and Notes with each of the selling stockholders, who are our lenders under the existing line of credit facility described above, pursuant to which each selling stockholder agreed to loan us \$2,500,000, or an aggregate of \$5,000,000, in convertible debt.

The Notes mature on June 22, 2010 and bear an interest rate of 5% due at maturity. Both the principal amount and any accrued interest on the Notes is convertible into the Company's common stock at a rate of \$0.33 per share. The conversion rate of the Notes is subject to customary anti-dilution protections, provided that the number of additional shares of common stock issuable as a result of changes to the conversion rate is capped so that the aggregate number of shares of common stock issuable upon conversion of the Notes will in no event exceed 19.99% of the aggregate number of shares of common stock presently issued and outstanding. The Notes do not contain market or trading-based ratchet or reset provisions. Under a related Registration Rights Agreement with the selling stockholders, we agreed to register for resale under the Securities Act of 1933, as amended, or the Securities Act, 19,000,000 shares of our common stock.

The Notes are secured on a first priority basis by all of our intangible and tangible property and assets. Payment of the Notes is guaranteed by our two subsidiaries, Spectral Solutions, Inc. and Illinois Superconductor Canada Corporation. Concurrently with the execution of the Securities Purchase Agreement, the selling stockholders, as the lenders of our existing line of credit arrangement, waived their right under that facility to receive the financing proceeds from the issuance of the Notes, allowing us to use the funds for product development or general working capital purposes.

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**PLAN OF DISTRIBUTION**

We agreed to register for public resale the shares of our common stock issuable to the selling stockholders, or their pledgees, donees, transferees or other successors in interest in connection with the selling stockholders' acquisition and conversion of the Notes. The registration statement of which this prospectus is a part has been filed with the Securities and Exchange Commission pursuant to the Securities Purchase Agreement. We have agreed to keep each such registration statement effective until the earlier of (a) the date on which all the holders of the registered shares have completed the sales or distribution of such shares or, (b) until such shares may be sold by such holders under Rule 144(k) (provided that our transfer agent has accepted an instruction from us to such effect). The aggregate proceeds to the selling stockholders from the sale of shares offered pursuant to this prospectus will be the prices at which such securities are sold, less any commissions. The selling stockholders may choose to not sell any or all of the shares of our common stock offered pursuant to this prospectus.

The selling stockholders, or their pledgees, donees, transferees or other successors in interest, may, from time to time, sell all or a portion of the shares of our common stock at fixed prices that may be changed, at market prices prevailing at the time of sale, at prices related to such market prices or at negotiated prices. The selling stockholders may offer their shares of our common stock at various times in one or more of the following transactions:

in the over-the-counter market;

on any national securities exchange or market, if any, on which our common stock may be listed at the time of sale;

through block trades in which the broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

through purchases by a broker or dealer as principal and resale by such broker or dealer for its account pursuant to this prospectus;

in ordinary brokerage transactions and transactions in which the broker solicits purchasers;

through options, swaps or derivatives;

in privately negotiated transactions;

in transactions to cover short sales;

through any other legally permissible method; and

through a combination of any such methods of sale.

The selling stockholders may also sell their shares of our common stock in accordance with Rule 144 under the Securities Act, rather than pursuant to this prospectus.

The selling stockholders may sell their shares of our common stock directly to purchasers or may use brokers, dealers, underwriters or agents to sell such shares. In effecting sales, brokers and dealers engaged by the selling stockholders may arrange for other brokers or dealers to participate. Brokers or dealers may receive commissions, discounts or concessions from a selling stockholder or, if any such broker-dealer acts

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as agent for the purchaser of such shares, from a purchaser in amounts to be negotiated. Such compensation may, but is not expected to, exceed that which is customary for the types of transactions involved. Broker-dealers may agree with a selling stockholder to sell a specified number of such shares at a stipulated price per share, and, to the extent such broker-dealer is unable to do so acting as agent for a selling stockholder, to purchase as principal any unsold shares at the price required to fulfill the broker-dealer commitment to the selling stockholders. Broker-dealers who acquire shares as principal may thereafter resell such shares from time to time in transactions, which may involve block

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transactions and sales to and through other broker-dealers, including transactions of the nature described above, in the over-the-counter market or otherwise at prices and on terms then prevailing at the time of sale, at prices then related to the then-current market price or in negotiated transactions. In connection with such resales, broker-dealers may pay to or receive from the purchasers of such shares commissions as described above.

The selling stockholders and any broker-dealers or agents that participate with the selling stockholders in sales of their shares of our common stock may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of such shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

From time to time the selling stockholders may engage in short sales, short sales against the box, puts and calls and other hedging transactions in our securities, and may sell and deliver their shares of our common stock in connection with such transactions or in settlement of securities loans. These transactions may be entered into with broker-dealers or other financial institutions. In addition, from time to time a selling stockholder may pledge our shares pursuant to the margin provisions of our customer agreements with our broker-dealer. Upon delivery of such shares or a default by a selling stockholder, the broker-dealer or financial institution may offer and sell such pledged shares from time to time.

We are required to pay all fees and expenses incident to the registration of the shares of our common stock, including fees and disbursements of counsel to the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. We have advised the selling stockholders that during such time as they may be engaged in a distribution of the shares of our common stock, they are required to comply with the anti-manipulative provisions of Regulation M under the Securities Exchange Act.

## **LEGAL MATTERS**

The validity of the shares of our common stock offered by this prospectus will be passed upon for us by Pepper Hamilton LLP, Philadelphia, Pennsylvania.

## **EXPERTS**

Our annual financial statements incorporated into this prospectus by reference to our annual report on Form 10-K, as amended, for the fiscal year ended December 31, 2005 have been audited by Grant Thornton LLP, independent public accountants, as indicated in their report with respect thereto and is included herein in reliance upon the authority of such firm as experts in accounting and auditing.

## **ADDITIONAL INFORMATION**

This prospectus is part of a registration statement we have filed with the Securities and Exchange Commission. This prospectus does not contain all of the information contained in the registration statement or the exhibit to the registration statement. For further information about us, please see the complete registration statement. Summaries of agreements or other documents in this prospectus are not necessarily complete. Please refer to the exhibit to the registration statement for complete copies of these documents.

We are subject to the information requirements of the Exchange Act and file reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy such reports, proxy statements and other information, including the registration statements and all of their exhibit, at the Securities and Exchange Commission public reference room located at:

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100 F Street, NE

Room 1580

Washington, D.C. 20549

You may obtain information on the operation of the Securities and Exchange Commission public reference room in Washington, D.C. by calling the Securities and Exchange Commission at 1-800-SEC-0330. Our Securities and Exchange Commission filings, including the registration statement of which this prospectus forms a part and the documents incorporated by reference that are listed below, are also available from the Securities and Exchange Commission's Web site at <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically.

The Securities and Exchange Commission allows us to incorporate by reference into this prospectus certain information that we file with us. This means that we can disclose important information to you by referring you to another document that we filed separately with the Securities and Exchange Commission. The information incorporated by reference is deemed to be part of this prospectus, except for any information superseded by information in this prospectus. You should read the information incorporated by reference because we are an important part of this prospectus.

We incorporate by reference the following documents that we have filed or may file with the Securities and Exchange Commission (but we do not incorporate by reference any documents or portions of documents that we furnish to or are otherwise not deemed filed with the Securities and Exchange Commission):

1. Annual Report on Form 10-K for our fiscal year ended December 31, 2005 filed with the SEC on March 31, 2006;
2. Quarterly Report on Form 10-Q for our quarter ended March 31, 2006 filed with the SEC on May, 15, 2006;
3. Quarterly Report on Form 10-Q for our quarter ended June 30, 2006 filed with the SEC on August 14, 2006;
4. Definitive Proxy Statement filed with the SEC on April 28, 2006
5. Current Report on Form 8-K filed on January 17, 2006;
6. Current Report on Form 8-K filed on February 9, 2006;
7. Current Report on Form 8-K filed on February 24, 2006;
8. Current Report on Form 8-K filed on June 20, 2006;
9. Current Report on Form 8-K filed on June 28, 2006;
10. The description of our common stock contained in our registration statement on Form 8-A, filed on June 6, 2002, including any amendment or report filed with the Securities and Exchange Commission for the purpose of updating such description; and

11. All documents filed by us with the Securities and Exchange Commission under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part until the offering of common stock pursuant to this prospectus is complete (other than those portions of such documents described in paragraphs (i), (k) and (l) of Item 402 of Regulation S-K promulgated by the Security and Exchange Commission.

If you request, either orally or in writing, we will provide you with a copy of any or all documents which are incorporated by reference. We will provide such documents to you free of charge, but will not include any

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exhibit, unless those exhibits are incorporated by reference into the document. You should address written requests for documents to: Corporate Secretary, ISCO International, Inc., 1001 Cambridge Drive, Elk Gove Village, IL 60007, (847) 391-9400.

Our Web site is located at <http://www.iscointl.com>. Information contained in our Web site is not a part of this prospectus.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our 10-Q, 8-K and 10-K reports to the SEC. Also note that we provide a cautionary discussion of risks and uncertainties relevant to our business in the Risk Factors section of this prospectus. These are factors that we think could cause our actual results to differ materially from expected results. Other factors besides those listed here could also adversely affect us. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.

**Part II**

**Information Not Required In Prospectus**

**Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth the various expenses in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates except the Securities and Exchange Commission registration fee.

SEC registration fee	\$ 631
Printing fees	1,000
Legal fees and expenses	9,500
Accounting fees and expenses	2,000
Miscellaneous fees and expenses	369
TOTAL	\$ 13,500

**Item 15. Indemnification of Directors and Officers**

Section 145 of the Delaware General Corporation Law ( Section 145 ) permits a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director, officer or agent of the corporation or another enterprise if serving at the request of the corporation. Depending on the character of the proceeding, a corporation may indemnify against expenses (including attorneys fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding if the person indemnified acted in good faith and, in respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. In the case of an action by or in the right of the corporation, no indemnification may be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine that, despite the adjudication of liability, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. Section 145 further provides that to the extent a director, officer, employee or agent of a corporation has been successful in the defense of any action, suit or proceeding referred to above, or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys fees) actually and reasonably incurred by him in connection therewith.

Article 9 of our Certificate of Incorporation provides that we shall indemnify our directors to the full extent permitted by the General Corporation Law of the State of Delaware and may indemnify our officers and employees to such extent, except that we shall not be obligated to indemnify any such person (1) with respect to proceedings, claims or actions initiated or brought voluntarily by any such person and not by way of defense, or (2) for any



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amounts paid in settlement of an action indemnified against by us without our prior written consent. We have entered into indemnity agreements with each of our directors and officers, including directors of our wholly owned subsidiaries. These agreements may require us, among other things, to indemnify such directors and officers against certain liabilities that may arise by reason of their status or service as directors or officers, as the case may be, to advance expenses to them as they are incurred, provided that they undertake to repay the amount advanced if we are ultimately determined by a court that they are not entitled to indemnification and to obtain directors and officers liability insurance if available on reasonable terms.

In addition, Article 8 of our Certificate of Incorporation provides that a director of us shall not be personally liable to us or our stockholders for monetary damages for breach of his or her fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to us or our stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for willful or negligent conduct in paying dividends or repurchasing stock out of other than lawfully available funds or (4) for any transaction from which the director derives an improper personal benefit.

We have obtained a directors and officers liability insurance policy which entitles us to be reimbursed for certain indemnity payments we are required or permitted to make to our directors and officers.

**Item 16. List of Exhibits**

The exhibits filed as part of this registration statement are as follows:

<b>Exhibit</b>	<b>Description</b>
3.1 <sup>(1)</sup>	Certificate of Incorporation of ISCO International, Inc.
3.2 <sup>(2)</sup>	By-Laws of the ISCO International, Inc.
3.3 <sup>(3)</sup>	Certificate of Amendment of Certificate of Incorporation of ISCO International, Inc.
3.4 <sup>(4)</sup>	Certificate of Amendment of Certificate of Incorporation of ISCO International, Inc.
3.5 <sup>(5)</sup>	Certificate of Amendment of Certificate of Incorporation of ISCO International, Inc.
3.6 <sup>(6)</sup>	Certificate of Amendment to Certificate of Incorporation of ISCO International, Inc.
3.7 <sup>(7)</sup>	Certificate of Amendment to Certificate of Incorporation of ISCO International, Inc.
4.1 <sup>(8)</sup>	Specimen stock certificate representing common stock
5.1*	Opinion of Pepper Hamilton LLP regarding legality of certain of the securities being registered.
10.1 <sup>(9)</sup>	Securities Purchase Agreement with Selling Stockholders dated June 22, 2006.
10.2 <sup>(10)</sup>	5% Senior Secured Convertible Note issued to Manchester Securities Corporation.
10.3 <sup>(11)</sup>	5% Senior Secured Convertible Note issued to Alexander Finance, L.P.
10.4 <sup>(12)</sup>	Registration Rights Agreement with Selling Stockholders dated June 22, 2006
23.1*	Consent of Grant Thornton LLP.
23.2*	Consent of Pepper Hamilton LLP (included in our Opinion filed as Exhibit 5.1 hereto).
24.1*	Powers of Attorney (included on signature page).

\* Filed herewith.

(1) Incorporated by reference to Exhibit 3.1 to ISCO International, Inc.'s Registration Statement on Form S-3/A, filed with the Securities and Exchange Commission (SEC) on August 13, 1998, Registration No. 333-56601.

(2) Incorporated by reference to Exhibit 3.2 to Amendment No. 3 to ISCO International, Inc.'s Registration Statement on Form S-1, filed with the SEC on October 26, 1993, Registration No. 33-67756 (the "IPO Registration Statement").

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- (3) Incorporated by reference to Exhibit 3.3 to Amendment No. 3 to the IPO Registration Statement.
- (4) Incorporated by reference to Exhibit 4.3 to ISCO International Inc. s Registration Statement on Form S-3/A, filed with the SEC on July 1, 1999, Registration No. 333-77337.
- (5) Incorporated by reference to Exhibit 4.4 to ISCO International Inc. s Registration Statement on Form S-8 filed August 7, 2000.
- (6) Incorporated by reference to Exhibit 3.1 to ISCO International Inc. s Current Report on Form 8-K filed on June 27, 2001.
- (7) Incorporated by reference to Exhibit 3.7 to ISCO International, Inc. s Annual Report on Form 10-K filed on March 31, 2005.
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- (11) Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed on June 28, 2006.
- (12) Incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K filed on June 28, 2006.

**Item 17. Undertakings**

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement to:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increases or decreases in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any additional or changed material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the Registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the Registration Statement or made in a document incorporated or deemed incorporated by reference into the Registration Statement or prospectus that is part of the Registration Statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the Registration Statement or prospectus that was part of the Registration Statement or made in any such document immediately prior to such date of first use.

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For purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 15

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above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by we are against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, ISCO International Corporation certifies that we have reasonable grounds to believe that we meet all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on our behalf by the undersigned, thereunto duly authorized in Elk Grove Village, Illinois on August 14, 2006.

**ISCO International Corporation**

By: **/s/ JOHN THODE**  
**John Thode**  
**Chief Executive Officer**

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## POWER OF ATTORNEY

Pursuant to the requirements of the Securities Exchange Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated. Each person whose signature appears below in so signing also makes, constitutes and appoints John Thode and Frank Cesario, as his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to execute and cause to be filed with the Securities and Exchange Commission any and all amendments and post-effective amendments to this Registration Statement and a related registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, and in each case to file the same, with all exhibits thereto and other documents in connection therewith, and hereby ratifies and confirms all that said attorney-in-fact or his substitute or substitutes may do or cause to be done by virtue hereof. Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/S/ JOHN THODE  John Thode	Chief Executive Officer and Director (Principal Executive Officer)	August 14, 2006
/S/ FRANK CESARIO  Frank Cesario	Chief Financial Officer (Principal Financial and Accounting Officer)	August 14, 2006
/S/ JAMES FUENTES  James Fuentes	Director and Chairman of the Board	August 14, 2006
/S/ AMR ABDELMONEM  Amr Abdelmonem	Director and Chief Technology Officer	August 14, 2006
/S/ MICHAEL FENGER  Michael Fenger	Director	August 14, 2006
/S/ RALPH PINI  Ralph Pini	Director	August 14, 2006
/S/ THOMAS POWERS  Thomas Powers	Director	August 14, 2006
/S/ GEORGE CALHOUN  George Calhoun	Director	August 14, 2006

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