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NEWS RELEASE

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FOR IMMEDIATE RELEASE

Image Sensing Systems Purchases Assets of EIS and Announces Expanded Strategy

Acquisition brings ISS leading radar-based traffic detection product

Complementary technology first step towards “hybrid” offerings and addressing adjacent markets

Saint Paul, Minn., December 6, 2007-- Image Sensing Systems, Inc. (“ISS” or the “Company”) (NASDAQ: ISNS) announced today that it has purchased selected assets from EIS Electronic Integrated Systems Inc. (EIS), including EIS’ market leading RTMS™ (Remote Traffic Microwave Sensor) radar product line, for initial consideration of \$10.9 million in cash and 147,202 shares of ISS common stock (valued at \$2.5 million as of yesterday’s closing price). In addition, EIS has a three-year earn-out agreement based on the performance of the purchased assets where, if performance is at the target level, EIS would receive an additional \$6 million in cash. ISS has established a line of credit with its bank to fund \$5 million of the cash consideration.

ISS expects the acquisition will be accretive to 2008 earnings. Although ISS is still evaluating the purchase accounting required, it anticipates recording a significant expense in the current quarter for acquired in-process research and development related to the purchased assets. Substantially all EIS employees are expected to join ISS, including its founder and president, Dan Manor. EIS had approximately \$8.0 million in revenue in its fiscal 2006.

Mr. Manor said, “EIS’ shareholders and managers are thrilled to join up with ISS. We view it as a win-win combination of technologies that are complementary in nature. Both companies have a global presence and brands that stand for quality. We couldn’t ask for a better partner to assist in the move from our third generation to fourth generation technology. The RTMS G4, which is expected to be commercially available early in 2008, will be the most advanced radar traffic

sensor on the market. This partnership is the logical next step in expanding toward systems solutions for traffic information and congestion management.”

Ken Aubrey, CEO of ISS, said, “We couldn’t be more excited to acquire the leading radar product and to add the talented EIS group to our team. We share similar histories and culture-- both pioneering our respective technologies and driving the market.”

Strategy Expansion

Mr. Aubrey continued, “Our core competency is computer enabled detection (CED) which we define as a group of technologies in which software, rather than humans, examines the outputs of complex sensors to determine what’s happening in the field of view in real-time. The key element in CED is complex algorithms that analyze the signal from the sensor and then pass information along to management systems, controllers or directly to users. With this acquisition we can provide the RTMS radar based CED in addition to our existing Autoscope® machine-vision CED offering.”

“Also, now that our product portfolio contains both video and radar detection, we can accelerate work on combining the best of video and radar to create a hybrid offering that doesn’t exist in the market today. The advantage of hybrid technology is that one sensor type can compensate for the limitations of the other sensor giving the potential for detection performance well above what can be achieved with one sensor alone. Additionally, the hybrid product can be made with an incrementally smaller cost than using two independent sensor types. “

“We will continue to leverage our strength in Intelligent Transportation Systems (ITS) to capture increased market share in this fast growing world-wide market. We also believe that our skills in CED and a hybrid offering will make our products increasingly attractive in ITS and adjacent markets. Ultimately, we see a convergence of ITS, security and environmental markets and we aim to be well positioned to be a leading provider of CED components to management systems providers. We will do this through continued internal development and selected product and channel acquisition strategies.”

Image Sensing Systems, Inc. (NASDAQ: ISNS) is a technology company specializing in software based detection solutions for the Intelligent Transportation Systems (ITS) sector and adjacent overlapping markets. Our industry leading computer enabled detection (CED) products, including the Autoscope® machine-vision family and the RTMS™ radar family, combine embedded software signal processing with sophisticated sensing technologies for use in transportation and safety/surveillance management. CED is a group of technologies in which software, rather than humans, examines the outputs of complex sensors to determine what is happening in the field of view in real-time. With more than 80,000 instances sold in over 60 countries worldwide, our depth of experience coupled with breadth of product portfolio uniquely positions us to provide

powerful hybrid technology solutions and to exploit the convergence of the traffic, security and environmental management markets. We are headquartered in St. Paul, Minnesota. Visit us on the web at imagesensing.com.

Safe Harbor Statement: Statements made in this release concerning the Company's or management's intentions, expectations, or predictions about future results or events are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements reflect management's current expectations or beliefs, and are subject to risks and uncertainties that could cause actual results or events to vary from stated expectations, which variations could be material and adverse. Factors that could produce such a variation include, but are not limited to, the following: the inherent unreliability of earnings, revenue and cash flow predictions due to numerous factors, many of which are beyond the Company's control; developments in the demand for the Company's products and services; relationships with the Company's major customers and suppliers; unanticipated delays, costs and expenses inherent in the development and marketing of new products and services; the impact of governmental laws and regulations; and competitive factors. Our forward-looking statements speak only as of the time made, and we assume no obligation to publicly update any such statements. Additional information concerning these and other factors that could cause actual results and events to differ materially from the Company's current expectations are contained in the Company's reports and other documents filed with the Securities and Exchange Commission, including its Form 10-K for the year ended December 31, 2006.