



# Loewen, Ondaatje, McCutcheon Limited

## Intrinsyc Software Inc. **STRONG BUY**

(CDNX - ICS \$4.49) [www.Intrinsyc.com](http://www.Intrinsyc.com)

12 - 18 Month Target Price \$9.70



### Company Description

*Intrinsyc provides leading-edge solutions for creating, linking and managing Internet devices and information appliances. Through using Intrinsyc technologies, manufacturers bypass the difficult, costly and time-consuming development process of creating embedded systems with networking functionality in-house.*

52-Wk Range	M.Cap.	Shares o/s	Rev 2000E	Rev 2001E	Rev 2002E	Cash & Equiv.
\$0.77-\$9.70	\$173 mm	38.5mm F.D.	\$3 mm	\$10.09 mm	\$20.83mm	\$18 mm

Fiscal Year End Aug. 31

### Investment Highlights

- ♦ The worldwide market for embedded systems and Internet devices is predicted to exceed 89 million units, or US\$17.8 billion by 2004. The software portion of this market is estimated to grow to \$8 billion by 2001.
- ♦ We believe Intrinsyc is uniquely positioned to benefit from this growth with its sophisticated suite of proprietary technology. It is rapidly emerging as a leader in providing connectivity solutions for both **Windows** and **Linux** based systems, and is striving to become fully OS independent.
- ♦ Recently, the company introduced *deviceCOM for Linux*, a technology that enables devices running on Linux to communicate seamlessly with Windows at the enterprise level. Technologically, this is a very significant achievement.
- ♦ The Company continues to attract large Fortune 500 clients. Recently, **The Ford Motor Co.** engaged Intrinsyc to provide networking solutions for its worldwide manufacturing facilities. Similarly, **Siemens A&D Group** selected Intrinsyc as sole system integrator for its new Open Panel Program. We expect these new customer engagements to significantly impact revenues in Fiscal 2001 and 2002.
- ♦ Based on the potential for significant price appreciation and the attractive market in which Intrinsyc operates, we recommend this stock as a **STRONG BUY**.

Loewen, Ondaatje, McCutcheon Limited has acted in an underwriting and/or financial advisory capacity for Intrinsyc Software Inc. within the past twelve months.

Toronto, Canada  
November 13, 2000

Wayne Phipps, CFA

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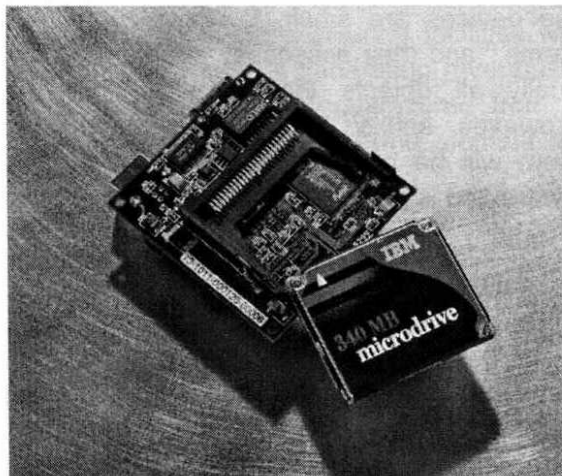
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Intrinsyc's CerfBoard, a low-cost Windows and Linux reference design that customers use to fast-track the creation of new Internet devices. It comes equipped with Intrinsyc's deviceRMS WebSuite for remotely configuring, managing and monitoring devices using a standard web browser. Photograph courtesy of Intrinsyc.



## Company Overview

Intrinsyc Software is a provider of leading-edge software and hardware solutions as well as custom engineering services that enable OEM's<sup>1</sup> to rapidly develop smart, Internet-ready products. The company is at the forefront of the emerging information appliance and Internet device<sup>2</sup> market with the ability to offer robust end-to-end connectivity solutions for both Windows and Linux-based systems. In our view, there are currently few (if any) companies in this market that can deliver the full ensemble of products that Intrinsyc offers. We are reiterating our **STRONG BUY** recommendation with a 12-to-18 month target price of \$9.70.

### Exhibit 1 Company Information

Recent Price	\$4.49	Market Cap FD	\$173 mm
52-Week Range	\$0.77 - \$9.70	Revenue 2000A	\$3 mm
Shares Issued	31.9 mm	Revenue 2001E	\$10.09 mm
Fully Diluted	38.57 mm	Revenue 2002E	\$20.83 mm
Market Cap (Basic)	\$143 mm	Cash	\$18 mm

Source: LOM and Intrinsyc

*We have recently seen the emergence of so-called "Internet Devices". All objects with a digital interface could be equipped with embedded systems.*

*Intrinsyc provides solutions for creating, linking and managing networks of embedded Internet devices.*

Information appliances include items such as hand-held computers, personal digital assistants (PDA's), smart mobile phones, and set-top boxes, and their popularity has risen dramatically with the growth of the Internet. Industrial examples of information appliances include building controllers, factory floor controllers, vending machines, and Point-of-Sale terminals. Hidden within these devices are small, low-cost computers, referred to as "embedded systems," and they essentially enable the devices to perform their function. Virtually all objects that have a digital interface, such as watches, microwaves, and VCRs, utilize embedded systems. A typical embedded system will be comprised of one or more microprocessors, and related software and is designed to perform a very specific function.

Intrinsyc's core value proposition to its customers is that it provides solutions for creating, linking and managing networks of embedded systems and Internet devices. Original Equipment Manufacturers (OEMs) purchase Intrinsyc's solutions so that they can bypass the difficult, costly and time-consuming development process of creating embedded systems with networking functionality in-house. Intrinsyc's technology enables OEMs to offer products that are capable of being linked to each other, as well as to other computing systems throughout the enterprise. Intrinsyc also enables OEMs to incorporate Internet-based remote management functionality into their products. Manufacturers who want to bring new web-enabled devices quickly to market turn to Intrinsyc as a means of expediting the development process. With the pace at which technology is currently advancing, OEMs are becoming more dependent on third party solution providers as a means of expediting the time-to-market for new products.

<sup>1</sup> Original Equipment Manufacturers

<sup>2</sup> The terms Information Appliance and Internet Device are used interchangeably.

Intrinsyc was founded in 1992 under the name ITC Microcomponents, and changed its name to Intrinsyc Software in June 1997. In April 1996 the company completed an initial public offering on the Vancouver Stock Exchange (now the Canadian Venture Exchange), and continues to trade on this exchange today.

## Recent Strategic Developments

### Ford Motor Co. Engages Intrinsyc to Provide Networking Solutions for its Worldwide Manufacturing Facilities

*Intrinsyc's technology solves a major connectivity challenge for Ford.*

Recently Intrinsyc announced an engagement by Ford Motor Company to provide networking solutions to Ford's manufacturing facilities. Intrinsyc has developed a solution called *OPCShield* which resolves a major interoperability issue on the factory floor for Ford. Ford's factories are currently installed with OPC servers<sup>3</sup> and these servers control various nodes throughout the factory. Ford has experienced a communications problem among the various nodes as these servers have a tendency to frequently crash, causing a loss of connection. *OPCShield* serves to prevent these servers from crashing, thereby enhancing the reliability of Ford's factory floor networking capabilities.

*Ford plans to install OPCShield in all of its manufacturing facilities.*

Throughout fiscal 2001, which began on September 1<sup>st</sup>, Intrinsyc should complete several deployments of *OPCShield* at Ford plants, in addition to the ones currently completed and in progress. Given Ford's expressed interest in working with Intrinsyc on a broad scale, and the fact that the auto company currently operates 60 manufacturing facilities worldwide, the magnitude of this opportunity in terms of generating revenues is considerably significant. We expect that revenues should come from licensing and engineering services, with a substantial recurring element from run-time licensing and maintenance fees.

*Revenues should come from licensing and engineering services.*

In addition to the revenue opportunities inherent in this announcement, we believe that attracting Ford as a customer serves as a very positive endorsement of Intrinsyc's technology. Both Intrinsyc and Ford are members of the OPC Foundation, an organization that works toward establishing open and interoperable interface standards for industrial automation and control applications. Within the OPC Foundation there are over 200 member companies that represent potential customers for Intrinsyc. Through having a high profile OPC Foundation member such as Ford successfully using *OPCShield*, Intrinsyc is well positioned to target these other companies to provide similar solutions.

<sup>3</sup> OPC stands for OLE (object linking and embedding) for Process Control. It is a technical specification that defines a set of standard interfaces based upon Microsoft's OLE/COM technology for users/developers of industrial automation devices/applications.



## **Siemens AG Engages Intrinsyc as Partner to Launch New Open Panel Program - Intrinsyc Will Act as Sole System Integrator**

Siemens AG recently engaged Intrinsyc to provide embedded networking solutions and services to Siemens' SIMATIC HMI (Human Machine Interface) panels as part of its new Open Panel Program. Within industrial automation, there has recently been a push toward open standards so that disparate devices can communicate with each other seamlessly. Prior to the launch of this open panel program, Siemens hardware was only optimized to run Siemens software HMI and control panels. This open panel program allows users of Siemens panels to create their own or select other third party customized solutions, and make them function seamlessly on Siemens hardware.

*Third party vendors wishing to offer Siemens' compatible software will have to be integrated through Intrinsyc.*

This partnership with Siemens should contribute to Intrinsyc's revenues going forward through fees from engineering services and run-time software licensing. Furthermore, in addition to revenues from Siemens, Intrinsyc should also realize revenues from third-party software vendors that want their software to work on Siemens' panels. Companies wishing to offer software that is compatible to Siemens' hardware will have to first go through Intrinsyc to be integrated, given that Intrinsyc has been chosen as the sole system integrator for this project.

## **Intrinsyc Announces New Networking Technology That Links Linux and Windows**

In September, Intrinsyc introduced a new technology called *deviceCOM for Linux* that enables embedded devices running on the Linux operating system to communicate seamlessly with Windows at the enterprise level. Technologically, this is a very significant achievement for Intrinsyc and its customers. Up until now, companies have been forced to choose one or the other - Linux or Windows - as their designated operating systems. This creates a problem because while Windows is strong at the enterprise level, Linux offers many advantages at the embedded level. If a customer wants to benefit from the strengths of both operating systems within the overall organization, it is very difficult to do so, since the inability to have the two systems communicate presents a very serious limitation. With Intrinsyc's *deviceCOM for Linux*, the enterprise and embedded level are bridged thereby eliminating the past drawbacks of functioning in a multi-operating system environment.

*The ability to enable Linux and Windows to communicate seamlessly is a major technological achievement for Intrinsyc.*

The commercial roll out of *deviceCOM for Linux* is not expected until January 2001. It will be offered to customers as a licensable product, similar to Intrinsyc's existing *deviceCOM* product.

## **TouchStar Hires Intrinsyc To Provide Networking Solutions**

TouchStar, a division of Williams Company (WMB - NYSE) recently hired Intrinsyc to provide networking solutions for its next generation of mobile computing platforms. TouchStar is a provider of hardware and software

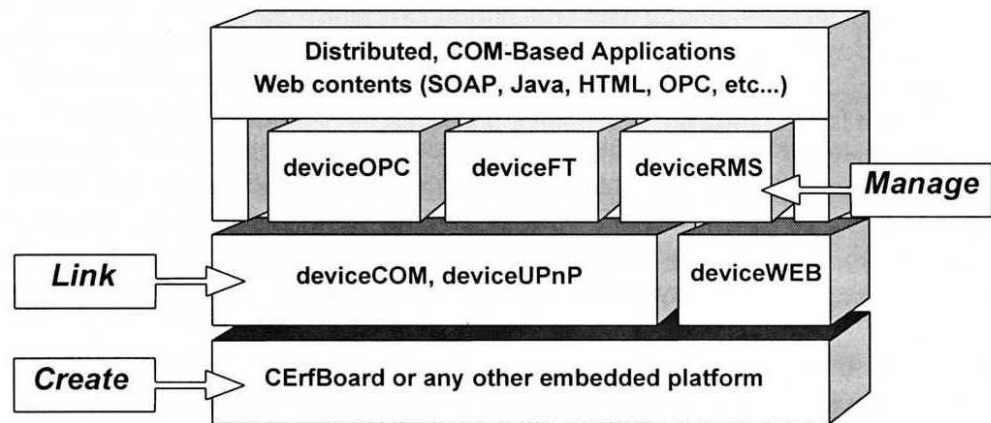
products for mobile computing applications, specifically for fuel, aviation, route accounting and field services industries.

This engagement should involve revenues in the form of engineering/consulting services, maintenance/support services, and run-time licensing. We believe that this initial engagement with TouchStar will give Intrinsyc a nice "foot-in-the-door" to Williams, its parent company, and its various subsidiaries. Williams Co. reported 1999 revenues in excess of US\$8 billion, and has a market cap of US\$18 billion.

## Core Technologies - A Portfolio Approach

Exhibit 2 graphically depicts Intrinsyc's suite of products, and how they fit together. For a brief description of each product offered by Intrinsyc please refer to Appendix A.

**Exhibit 2**  
**Product Portfolio**



*Intrinsyc provides an integrated ensemble of solutions.*

Source: Intrinsyc

The key point to note from Exhibit 2 is that rather than offering an individual, or narrowly defined product or solution, Intrinsyc provides its customers with an integrated ensemble of solutions. The company's technologies form a portfolio of building blocks that provide end-to-end solutions for its customers. We view this as a key competitive strength for Intrinsyc, as having a complete solution serves to broaden the company's appeal to its client base and it also serves to lengthen the technological lead over its competitors. While a competitor may be able to replicate one aspect of Intrinsyc's product line, we believe that the time involved in researching, developing and bringing-to-market a suite as complete as Intrinsyc's would be considerable. In light of this we estimate Intrinsyc has an approximate technological lead of 12-to-18 months over potential competitors.

*The company has recently emphasized OS independence as an important goal.*

Intrinsyc's products are primarily used by its customers on the embedded Windows and Linux operating systems. These two operating systems are the most widely used at this time for industrial and commercial applications. The fact that Intrinsyc has been able to offer the choice of two OS's to its customers is a testament to its technological strength. Most competitors are limited to just one OS, thereby reducing the flexibility they can offer their

customers. Intrinsyc has emphasized OS independence as a major corporate goal, and the recent progress it has made on the Linux front is a major step toward reaching this goal. As other OS's grow in popularity, such as Windriver's VXWorks, we expect that Intrinsyc will be able to accommodate them.

Intrinsyc's deviceCOM product is a good example of the kinds of solutions provided by the company's technologies. DeviceCOM addresses a major technical problem with Microsoft's operation system. In an effort to promote open standards computing, Microsoft developed COM/DCOM<sup>4</sup> - an open standard that forms the basis for Windows' distributed Internet architecture (DNA). The existence of this standard enables programmers to develop objects that can be easily accessed by any COM-compliant application. In essence, the COM/DCOM standard allows component-based applications to be extended across enterprise and desktop systems, so that they can communicate directly across networks with each other. The problem however, is that while this standard is well proven in a desktop and enterprise environment, it is not well adapted for use in situations with high reliability or low memory requirements. It is also not well suited to operate over wireless networks. This presents a major problem because it means that developers of embedded systems and OEMs who wish to create Internet devices capable of being linked to desktop and enterprise systems are unable to do so. Intrinsyc's deviceCOM product solves this problem directly by extending COM/DCOM technology down to a wide range of Windows CE and Windows NT embedded systems, enabling them to be linked to desktop and enterprise systems. Intrinsyc's deviceCOM is the first product on the market capable of performing this function.

## Key Verticals Targeted by Intrinsyc

### 1. Industrial Automation

*The market for Industrial Automation software applications is expected to reach \$6.5 billion by the end of 2000.*

The Industrial Automation market is generally considered to be comprised of vendors of devices or systems that are used in factory automation, process control, and test and measurement applications. This vertical is poised to provide great opportunities for Intrinsyc, as the demand for reliable factory floor connectivity grows. Industrial organizations increasingly want remote factory management and data acquisition capabilities incorporated into their production processes. Current industry leaders include companies such as Rockwell, Intellution, Siemens and Honeywell. According to a report published by Find/SVP<sup>5</sup>, the market for computers and software applications used for Industrial Automation is expected to reach US\$6.5 billion by the end of 2000, and is estimated to continue to grow at 18.5% per year beyond 2000.

### 2. Building Automation

The Building Automation industry is similar to Industrial Automation in terms of needs and opportunity. The industry leaders include Siemens

<sup>4</sup> Component Object Model/Distributed Component Object Model

<sup>5</sup> Find/SVP Report - "World Market for Industrial Computers"



*Companies have increasingly sought third party solutions providers, rather than developing in-house.*

Building Technologies, Johnson Controls, Honeywell, and Trane. The combined sales of these four companies totals US\$90 billion, with the controls-related portion estimated at approximately US\$10 billion.<sup>6</sup> Companies such as these are now demanding low cost and open standard connectivity, as well as remote management capabilities for their products. Because of the complexity in developing these capabilities, a recent trend has been against developing proprietary "in-house" solutions in favour of outsourcing to third party solutions providers.

### **3. In-Vehicle Computing**

The In-Vehicle Computing market is one that has received a considerable amount of attention recently. IBM and Microsoft as well as several automobile manufacturers have invested considerably in this area. The leading OEMs in this space include Eaton, Symbol, Bosch and Radisys. Some sample applications of in-vehicle computing include remote management, monitoring and data acquisitions from individual vehicles or fleets, as well as traffic monitoring and management. The market for intelligent transportation systems is growing rapidly as the desire for increased productivity from mobile workers builds. The economics of implementing in-vehicle computing systems in the commercial sector are powerful, as the reduced operating costs and more efficient use of resources are estimated to quickly outweigh the implementation costs. The market for in-vehicle network computing systems is expected to reach US\$1.3 billion by 2002, according to a recent VDC Report.<sup>7</sup>

### **4. Point of Sale Terminals**

The market for point of sale terminals is estimated to grow to US\$2.3 billion by 2003 according to Frost and Sullivan. Included in the Point of Sale Terminal category are vending machines, cash registers, bar code scanners, and ticket dispensers. These terminals have a strong requirement for low cost, highly reliable and open standard internet-connectivity. Two leaders in this industry are Intermec and Universal, both of which have purchased Intrinsyc solutions in the past.

### **5. Telecom**

The telecommunications vertical represents a relatively new foray for Intrinsyc. The Company has recently increased its focus on telecom OEMs in its sales effort as these OEMs are growing increasingly interested in providing smart-phone products to their clients. In a recent industry report by Lehman Brothers, the telecommunications market was identified as one of the "sweet spots" within the entire embedded systems market<sup>8</sup> for embedded software providers.

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<sup>6</sup> Intrinsyc Estimates

<sup>7</sup> VDC Report "In-Vehicle Network Computing Systems"

<sup>8</sup> Lehman Brothers Report - "Embedded Systems and the Emergence of Internet Appliances"



## Business Model

Intrinsyc derives revenue from three key sources incorporated in its business model:

### **1. Sales of its proprietary software developer kits and hardware platforms to OEMs**

Developer tool kits range in price from US\$5,000 to US\$50,000, with the average costing approximately US\$15,000. CerfBoard developer toolkits are priced at approximately US\$2,500, with additional boards available at reduced rates based on volume.

### **2. Revenues received from the provision of services and support**

Intrinsyc provides extensive technical service and support for its clients, including custom development, software maintenance, systems integration and consultation. Intrinsyc receives approximately US\$20,000 per month per engineer for its technical services provision. Service and maintenance contracts are attractive for the company because they represent a form of recurring revenue.

### **3. Recurring revenues from run-time licensing agreements with OEMs**

*Run-time licensing is a very high margin business. Intrinsyc receives a fee for each and every unit of a product that an OEM manufactures*

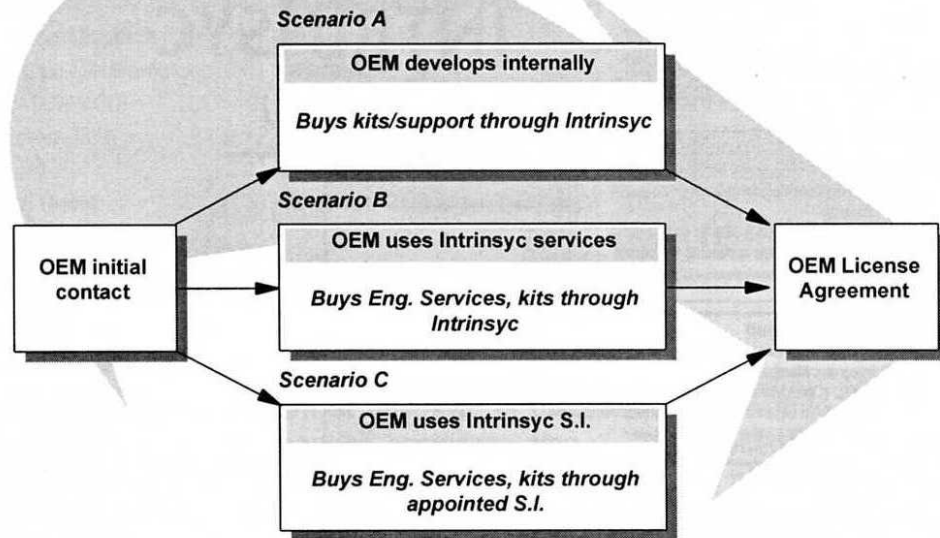
The run-time licensing element of Intrinsyc's business model clearly represents an appealing opportunity for the company in terms of future revenue growth. Obtaining contracts with strong run-time licensing has been emphasized as a key priority for the company as it ramps up its sales efforts. Run-time licensing essentially means that once an OEM decides to use an Intrinsyc software solution in one of its products, Intrinsyc receives a fee for each and every unit of that product that the OEM manufactures. This results in a recurring stream of revenues for Intrinsyc throughout the production life of an OEM's product.

Intrinsyc requires that its customers sign an OEM licensing agreement at least 60 days prior to the scheduled commercial shipment of their products that incorporate Intrinsyc technologies. We are pleased with the success the company has experienced to date in landing run-time licensing agreements, and expect that as its development kits get in the hands of more OEMs, run-time licensing as a percentage of total revenues will grow considerably. Exhibit 3 depicts three typical paths taken by an OEM to establishing a licensing agreement with Intrinsyc.

### Exhibit 3 Path to OEM License Agreement

*OEM licensing agreements must be signed at least 60 days prior to commercial shipment.*

*Intrinsyc has been successful in attracting high-profile industry partners thus far. It must continue to focus on forming partnerships.*



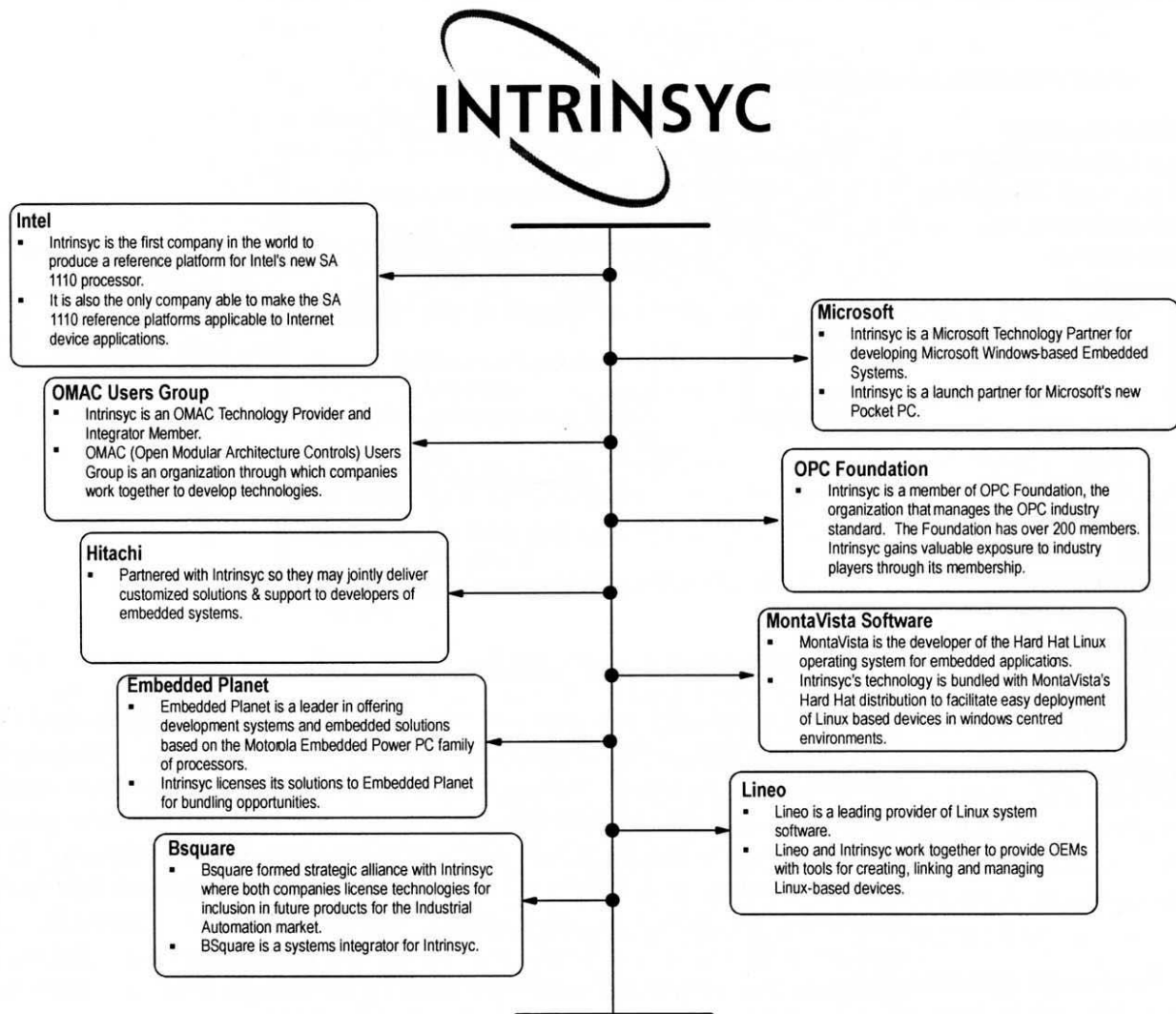
Source: Intrinsyc

### Strategic Partners and Clients

To a large extent, the success of Intrinsyc will be determined by its ability to form key strategic partnerships with important industry players. The task of "going-it-alone" in the technology sector is far too monumental for a single company to complete successfully. Having industry partners lends credibility to a company's technology, and these partners often perform very important sales, marketing and distribution functions. To date, Intrinsyc has been successful in attracting strategically important industry partners, as evidenced by the recent Lineo and MontaVista announcements. Exhibit 3 illustrates the company's most noteworthy partnerships thus far. With the positive industry attention recently afforded Intrinsyc, we are confident that more partnerships should follow.



### Exhibit 4 Major Industry Partnerships and Collaborations



Source: LOM

*The company gained ten new clients in the last quarter alone. No single client accounts for more than 10% of revenues.*

We also view the presence of a broad customer base to be key to Intrinsic's long-term success. The company's list of customers is impressive, and it is growing rapidly. Included in this list are several Fortune 500 corporations, and in the last quarter alone, ten new clients were added. In 1999, Intrinsic derived 80% of its revenues from only two customers. Currently, it has 39 revenue generating customers, none of whom account for more than 10% of year-to-date revenues. This represents a considerable improvement for the company, and reduces its overall dependence on any one customer. Exhibit 5 provides a sample list of Intrinsic's clients.

### Exhibit 5 Sample Client List

Advantech	Hitachi	Mitsubishi
BSquare	ICI Greece	Schneider Electric
Digital Dispatch	Iconics	Siemens A&D
Digital Electronics	Inforetech	Siemens Building Technologies
EATON CCD	Intellution	Standard Pacific
Eaton -TISA	Intermec	Teletrol
Ford	Johnson Controls	TouchStar
FYI Quest	Microsoft Consulting Services	Tri-Tek
		Western Money Systems

Source: LOM and Intrinsyc

*The company has a strong technological visionary in its CEO.*

### Management

The management team at Intrinsyc, in our view, is more than capable of executing the company's business plan. The recently announced engagements with Siemens and Ford provide evidence of the team's ability to attract major industry players and to close deals. The team has a strong technological visionary in its CEO, and possesses the necessary depth in the core areas of financial management, sales and marketing, and engineering. It has experienced success in attracting an impressive pool of talent throughout the organization, and has very little turnover of employees.

On September 6<sup>th</sup>, the company announced the appointment of Neil McDonnell as President and Chief Operating Officer. Mr. McDonnell has a strong operational background gained through 15 years of senior managerial experience with high-tech firms. We view this appointment very favourably as the challenge of managing the day-to-day operations has intensified with the recent ramp up of revenue opportunities faced by the company. Mr. McDonnell appears well qualified to meet this challenge.

Appendix B provides a brief description of the key members of the management team.

### Industry Overview

*The Embedded Systems market is poised for exponential growth.*

#### An Industry Poised for Colossal Growth

The aggregate embedded systems and Internet appliance industry represents a potentially enormous market, yet one that is incredibly "young". Only recently have we seen reference to embedded systems made by the mainstream media, the most notable of which first occurred on the cover of Business Week in March 1999. Since then, they have increasingly become the topic of much media coverage, and several major industry players have begun to publicly emphasize the importance of these systems. Bill Gates, for example, has been public in emphasizing the importance of Embedded Windows to the future growth of Microsoft, and the 1999 Comdex show was entitled "Beyond the PC" - a direct reference to the emergence of embedded systems.

*The "post-PC era" has arrived.*

We are currently in the early stage of what many call the "post-PC era". The term "post-PC era" is meant to suggest that the PC market is reaching its peak, and that PC's will decrease in usage as computing devices with low-cost chips, application-specific designs and Internet connectivity grow in popularity. Examples of such devices include television set-top boxes, Web-enabled telephones, and web-enabled personal digital assistants. The embedded systems and Internet appliance market has garnered a fair amount of coverage recently by several industry analysts and consulting firms. While there is some discrepancy about specific numbers among these market watchers, virtually all agree that there will be growth and that it will be dramatic. Exhibit 6 provides a sample of expected growth rates by various market watchers.

#### Exhibit 6 Industry Statistics

*While there is discrepancy about specific numbers, market watchers agree that growth will be dramatic.*

- "Embedded devices, or Internet Appliances are predicted to grow at a compounded annual growth rate in excess of 131% per year...bringing the production of such devices to 43 million by 2002." (International Data Corporation)
- "The Software portion of embedded market will grow to US\$8 billion by 2001." (Raj Gollamundi, Dain Rauscher Wessels)
- "Shipments of information appliances are expected to surpass consumer PC shipments in 2002, reaching 89 million units or \$17.8 billion in 2004." (International Data Corporation)
- "In the U.S., different types of Internet Appliances already constitute a nearly US\$6 billion market. Users will drive this market to more that US\$16 billion in 2002." (Forrester Research)
- "20 intelligent devices exist for every person in the US." (Forrester)
- Over 20.5 million households would access the Internet through non-PC devices by the year 2002. (Juniper Communications)
- Embedded systems are used in over 90% of all electronic devices sold worldwide...some visionaries estimate that by 2010 there may be 10 times as many programmers writing for embedded systems as for traditional computers. (Lehman Brothers)

#### Competition

The market for embedded systems and Internet appliances is in the very early stages of adoption, and the availability of competitive market data is somewhat limited. This market is highly fragmented with many small private companies competing for a piece of the pie. While we maintain that Intrinsyc faces few competitors that can offer a comparable ensemble of solutions, some of its technologies in isolation are subject to competitive threats. For instance, there are several companies that make remote management systems similar to that of deviceRMS. Companies such as **GoAhead**, **RapidLogic** and **Bsquare** all compete in this space. Similarly, there are several embedded web server providers whose products compete with Intrinsyc's *deviceWEB* solution. As the market matures and consolidation begins, we anticipate that these newly merged companies will be better positioned to offer more complete product lines that compete directly with those of Intrinsyc. The market in which Intrinsyc operates is simply too attractive to be void of serious competition over the long term. In our opinion,



management has expressed its awareness of this fact and has taken appropriate action to remain ahead of the pack. For example, Neil McDonnell's recent appointment was made specifically to address any business plan execution issues, and new innovative solutions continue to be added to the company's product suite. While these are positive steps for the company, it must remain committed to staying ahead of its competitors as it progresses with its business plan.

### **Driving Forces of Industry**

The information appliance and embedded systems software market is being driven by some very powerful forces of change. These forces are largely responsible for the paradigm shift we are witnessing whereby machines and devices of all types are being equipped with microchips and networking capabilities.

#### **1. Availability of Cheaper and Faster Microprocessors:**

With the improved price/performance ratio of microprocessors, embedded systems can efficiently be developed to perform a more sophisticated range of functions. Applications that would have been considered impractical only a few years ago, due to cost and/or power constraints are now available for a fraction of the cost.

#### **2. Availability of Cheaper and Greater Bandwidth**

With the dramatic growth in Internet usage, considerable investment has been made in bandwidth technology and infrastructure. Bandwidth availability is no longer the constraining factor that it once was for transmitting data, and the costs involved for the end-users have declined dramatically.

#### **3. Increased Outsourcing of Software Development by OEMs**

OEMs have come to realize the benefits of outsourcing embedded software development to companies like Intrinsyc. The complexity of embedded software makes for long and expensive development cycles, particularly when companies don't have the proper engineering resources in place. Through buying "off-the-shelf" software, OEMs realize faster time-to-market for their new products, and they receive the appropriate technological support and consultation from the software vendor. For these reasons, the number of OEMs buying solutions from embedded software developers, rather than developing in-house, is growing rapidly.

#### **4. Demand for Networking Capabilities:**

The ability to be connected to the Internet is rapidly becoming a standard requirement for a broad range of devices. Everything from factory machinery to consumer appliances are being built with networking capabilities, so that these items may not only communicate with their operators via the web, but may also communicate with each other. The economic factors driving these items toward being Web-enabled are very strong. For instance, by having networking capabilities in its production equipment, a manufacturing company can easily upgrade the software or adjust machine settings simply by accessing the Internet. There is no need for the costly task of dispatching maintenance personnel.



## Risk Factors

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Intrinsyc is in a market rich with opportunity and poised for explosive growth. While the company's future appears extremely bright, there are some associated risks of which investors should be cognizant.

### Increasing Competition

As stated earlier, due to the attractiveness of the market in which Intrinsyc operates, it is only a matter of time before we see the emergence of new competitors. Faced with a window of opportunity to become the dominant provider of connectivity solutions for the embedded space, Intrinsyc must act quickly to remain established as a leader.

### Operating System Dependence

When we last published on Intrinsyc, its entire suite of products was based on the Windows operating system. At that time, the risk of operating system dependence for the company was much greater than it is today. The risk was that, in the future, other operating systems would come to dominate at the expense of Windows, thus decreasing the attractiveness of the company's product line. Since then Intrinsyc has expanded its operability to include the Linux operating system, thereby reducing this risk substantially (although not completely eliminating it). Linux has grown in importance, particularly within embedded applications, and Intrinsyc has defined itself as a company capable of offering both Windows and Linux-based solutions.

While there are other operating systems that will surely grow in importance in the future, we are comfortable that Intrinsyc has the R&D expertise to accommodate them when necessary. The company must remain technologically agile so that it can respond promptly to customer demands for new and emerging operating system-based products. An inability to do so may represent a serious future risk for the company.

### Managing Growth

Intrinsyc has just recently evolved from being a company focused on R&D to one with a suite of software solutions for which there is great demand. Revenues have increased dramatically over the past several quarters, as the company's newly expanded sales and marketing team have gone into execution mode. Managing this stage of growth for the company going forward will be a challenging task, and will require considerable attention from senior management. Maintaining cost controls, quality customer service, and technological leadership is of pivotal importance for Intrinsyc's long-term viability. Failure to achieve these tasks could pose considerable risk for the company. The recent appointment of Neil McDonnell to oversee operations should serve to minimize this risk of growth management.

### Long Sales Lead-time for Licensing Agreements

The "cutting-edge" nature of Intrinsyc's product and the sheer newness of this market requires a relatively long sales lead-time for OEM's. For many OEMs, the solutions offered by Intrinsyc represent unfamiliar territory. Therefore, potential clients often require additional research time to

*Faced with great opportunities, the company must focus on execution.*

experiment with, and evaluate the product prior to integrating it on a grand scale. From Intrinsyc's perspective, this can mean a period of several months of working with a client before a licensing agreement can be reached. Such conditions can lead to lumpy revenues, and therefore present an element of risk. However, as this technology grows more familiar to OEMs, and the benefits of Intrinsyc's software can be more widely seen in competitor's products, we believe this lead-time will be shortened.

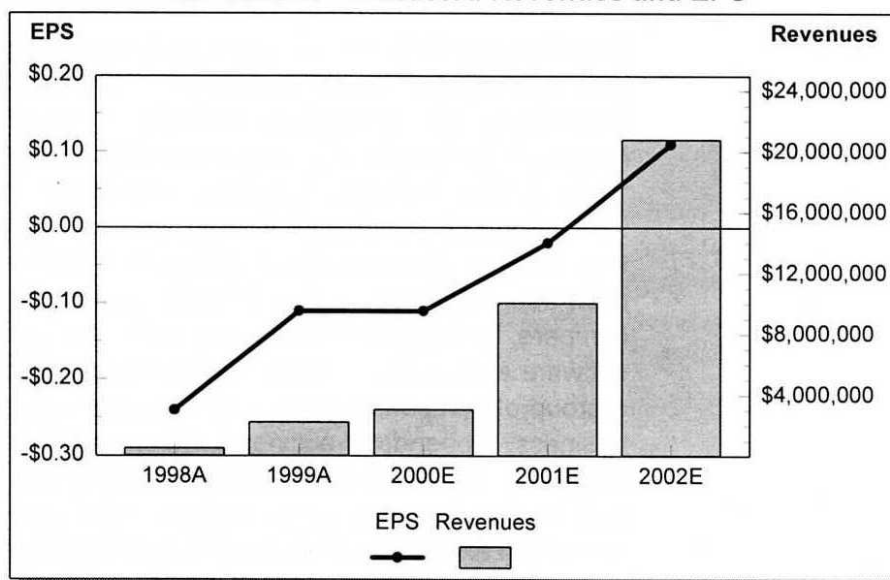
### Dependence on Key Personnel

For any high-tech firm, the loss of key personnel can be detrimental, and great effort should be undertaken to minimize the risk of such an occurrence. Skilled developers are in high demand, and companies are using aggressive tactics to attract such talent. Although Intrinsyc has been fortunate in retaining its core development team, it is not immune to this risk. However, its compensation and stock option plan appears competitive enough to provide incentive for its employees to remain with Intrinsyc.

### Financial Analysis and Valuation

Intrinsyc is in the early growth stage of its development and as such should be valued in terms of revenue growth. The company has only recently initiated its sales and marketing plan, so for the purposes of this valuation exercise, we shall focus on multiples of forecasted revenue rather than earnings. As the company successfully expands its market presence to the point of realizing a significant profit, earnings will become a better indicator of its progress. We anticipate a small loss in fiscal 2001, with profitability expected by 2002.

**Exhibit 7**  
**Current and Forecasted Revenues and EPS**



Source: LOM and Intrinsyc

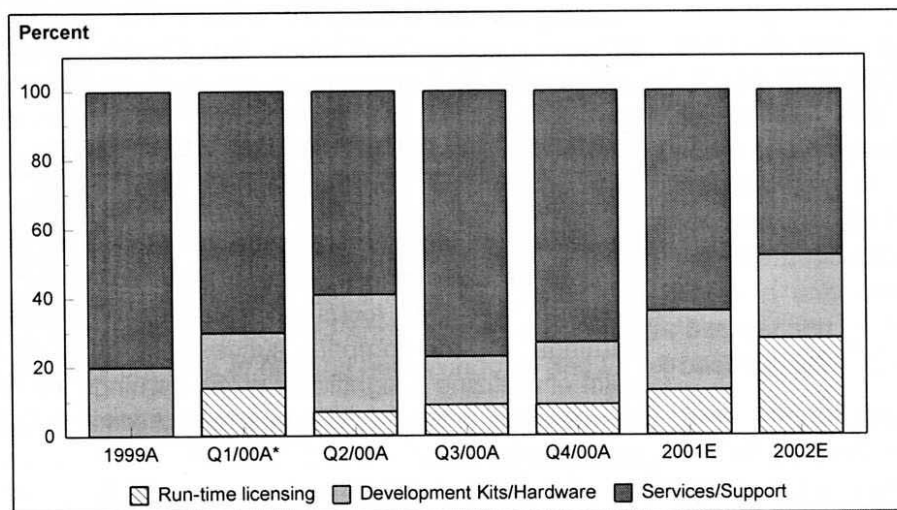
*We estimate year over year top line growth in excess of 100% for fiscal 2001 and 2002.*



Following its recent \$13.5 million financing, Intrinsyc has a strong balance sheet and no long-term debt. The company's current cash position should enable it to adequately finance its planned growth strategy and will provide a sense of security for large corporate clients averse to dealing with smaller start-up firms such as Intrinsyc.

As the company evolves, the proportion of revenues that are of a recurring nature should increase substantially. As the number of development kits in circulation grows, we expect that increased run time licenses and recurring engineering service/maintenance contracts should follow. Exhibit 8 illustrates our forecasted revenue breakdown.

**Exhibit 8**  
**Revenue Breakdown (Actual and Forecasted)**



\*Approximate  
Source: LOM

*In light of the attractive market in which Intrinsyc operates, and the anticipated explosive growth of this market, we recommend Intrinsyc as a **STRONG BUY**.*

Based on our financial forecasts, outlined in Appendix C, we estimate year over year top-line growth in excess of 100% for fiscals 2001 and 2002. In determining an appropriate multiple to apply to Intrinsyc's forecasted revenues, we looked to other public companies currently offering similar-type services and software solutions. However, due to the uniqueness of Intrinsyc's product/services offering, and the newness of the industry in which the company operates, the list of directly comparable companies that we can draw upon is limited. We feel that for valuation purposes it is most helpful to compare Intrinsyc to those companies that provide Internet infrastructure software and services. While this is a fairly broad category we have chosen a group of companies that we feel most closely resembles Intrinsyc's line of business. Appendix D outlines our chosen comparables and their associated multiples. These companies target many of the same markets as Intrinsyc, their product functionality resembles parts of Intrinsyc's offering, and they are faced with expansive market opportunities, just as Intrinsyc is.

Intrinsyc currently trades at a price/2001E revenue multiple of 17X versus the group average of 25X, which represents a discount of 32%. Applying the group multiple to Intrinsyc's forecasted revenues suggests a price of \$6.55. We believe that, in determining a near-term target price for the company, a premium of at least 20% should be applied to this multiple since these

comparables are substantially more mature than Intrinsyc. Intrinsyc is just now positioned to experience the dramatic ramp up in sales that these comparables have recently experienced and much of this growth has not been factored into the company's share price. Applying a price/2001E revenue multiple of 30X suggests a near term price of \$7.90, representing a potential return in excess of 75% from current price levels.

The group of comparables chosen for our purposes trades at an average price/2002E revenue multiple of 18X. Applying this to Intrinsyc's fiscal 2002 revenue estimates gives us a 12-to-18 month target price of \$9.70. The factors which we feel will drive the stock to this price over the coming quarters include: 1) continued development of channel partnerships, 2) continued progress on becoming fully OS independent, and 3) continued achievement of run-time licensing agreements and contracts that involve recurring revenue. Appendix E highlights the progress we feel Intrinsyc has made on these fronts since our last report, dated April 2000.

We continue to recommend Intrinsyc as a **STRONG BUY**.

## APPENDIX A

### Portfolio of Intrinsyc Products

**CerfBoard**, a low-cost embedded Windows and Linux reference design that can be used to fast-track the creation of new Internet devices.

**DeviceCOM for Windows CE and NT**, a software solution for reliably linking Internet devices to the web and the enterprise over wired or wireless communications networks, and **deviceCOM for Linux**, a new networking technology that reliably links Linux-based devices to Windows enterprise systems.

**DeviceWeb**, a powerful embedded Windows web server, designed to easily turn any consumer, commercial or industrial device into a standard Internet web server.

**DeviceRMS**, a software solution for remotely configuring, managing, and monitoring devices using a standard web browser.

**DeviceOPC**, a specialized software solution for industrial automation, designed to reliably link industry-standard compliant products, and **deviceOPC for Linux**, a software toolkit that allows you to quickly and easily create OPC servers for Linux-based solutions.

In addition to these products Intrinsyc also offers **Consulting and Support** services.

Source: Intrinsyc

## APPENDIX B

### Management Biographies

**Derek Spratt**, Intrinsyc's Chairman and CEO, is the strategic visionary and founder of the company. Mr. Spratt has held various senior level positions with technology companies throughout his career. Prior to founding Intrinsyc, he co-founded PCS Wireless and served as Executive Vice President. He also served as Vice President of Nexus Engineering and held a variety of positions within Motorola's wireless data division. Mr. Spratt holds a BSC. (Electrical Engineering) from Queens University.

**Neil McDonnell**, President and Chief Operating Officer, has more than 15 years experience in the management of high tech companies. Most recently, Mr. McDonnell served as Executive Vice President of Plexus Systems Design, where he was responsible for overall management of the company. Prior to Plexus, he was the president of dba Telecom Inc. He has also held management positions at Nortel Networks, Dynapro and Epic Data. Mr. McDonnell holds an MBA from the University of British Columbia.

**Rod Campbell**, serves as Chief Financial Officer and Vice President, Finance & Administration. Mr. Campbell was employed with CIBC prior to joining Intrinsyc, where he was Director of Knowledge-based business. In this capacity he was responsible for providing financial and strategic advice, value-added partnering, and corporate finance services to middle-market and emerging-growth technology companies. Mr. Campbell holds an MBA from the University of British Columbia.

**Guylain Roy-MacHabee**, Vice President of Consulting and Support has extensive experience in the telecommunications and mobile computing industries. He has worked with such companies as Ericsson, Nortel, Broadband Networks and PCS Solutions. Mr. Roy-MacHabee has a background in computer engineering, speech compression technology and wireless communications systems. He earned both a Master and a Bachelor degree in Electrical Engineering from McGill University.

**David Manuel**, Vice President of Engineering Services, has over 14 years of software development and engineering experience, gained mostly through working with international organizations. Prior to joining Intrinsyc Mr. Manuel was based in South America, where he served as Director of Engineering for a large hardware infrastructure project. He also spent several years with MacDonald Dettwiler & Associates, where he was involved in projects for the European Space Agency and the Saudi Centre for Remote Sensing. Mr. Manuel graduated from McMaster University with a degree in Computer Engineering.

**David W. Monroe**, Vice President of Sales and Marketing has solid experience in the high-technology sector in the capacity of senior sales executive. He has a proven record in growing new business revenue and profits in both mature and start-up companies. Mr. Monroe was most recently the District Sales Manager for RedCelsius Inc., based out of Atlanta, Georgia. Prior to that, he was Vice President, Sales & Marketing for Plexus Systems Design Ltd. Mr. Monroe holds a Bachelor of Arts in Geography from the University of Western Ontario.

### Board of Directors

**Derek Spratt - Chairman and CEO, Intrinsyc Software**

**Morgan Sturdy, BBA - EVP and COO of Nice Systems Ltd, Chairman of Infowave**

**William T.C. Yu - BSME, MBA - Board Member**

**Ronald P. Erickson, BA, MA, JD - Chairman of eCharge Corp. (Seattle, Washington)**

**Robert Gayton, Ph.D., FCA - CFO of Western Copper Holdings Ltd. (West Vancouver, BC)**





# APPENDIX C

## Financial Statements

### INTRINSYC SOFTWARE INC.

#### Income Statement

In Canadian Dollars

FISCAL YEAR END AUG 31	FY 1998A	FY1999A	FY2000A	FY2001E	FY2002E
<b>Sales</b>	537,857	2,232,152	2,974,363	10,095,000	20,831,500
Cost of goods sold	337,117	1,249,178	1,573,957	4,778,200	9,329,620
Gross profit	200,740	982,974	1,400,406	5,316,800	11,501,880
<b>Expenses</b>					
Administration	1,429,923	1,277,909	2,036,467	2,207,500	2,570,925
Sales and marketing	986,897	1,178,402	2,035,685	3,125,375	3,844,845
Research & development	1,167,762	513,202	918,592	1,286,425	1,866,380
Costs relating to failed merger	515,581	82,855	-	-	-
	4,100,163	3,052,368	4,990,744	6,619,300	8,282,150
EBIT	(3,899,423)	(2,069,394)	(3,590,338)	(1,302,500)	3,219,730
Interest Income	25,047	18,826	192,060	693,290	729,778
Taxes	-	-	-	-	-
<b>Net Income (Loss)</b>	<b>(3,874,376)</b>	<b>(2,050,568)</b>	<b>(3,398,278)</b>	<b>(609,210)</b>	<b>3,949,508</b>
Earnings (loss) per share - Basic	-0.24	-0.11	-0.16	-0.02	0.12
Earnings (loss) per share - FD			-0.10	-0.02	0.10
Shares outstanding (basic)	15,869,330	17,981,235	21,893,901	31,900,000	31,900,000
Shares outstanding (fully diluted)			33,000,000	38,570,000	38,570,000

# **APPENDIX C** **Financial Statements**

(continued)

## **INTRINSYC SOFTWARE INC.**

### **Balance Sheet**

In Canadian Dollars

	1998A	1999A	2000A	2001E	2002E
<b>ASSETS:</b>					
<b>Current</b>					
Cash and cash equivalents	834,619	201,780	7,188,100	21,456,085	23,319,535
Accounts Receivable	315,088	771,153	688,468	1,613,597	4,260,904
Due from Annabooks Software	172,965	-	-	-	-
Inventory	-	37,859	326,606	379,342	390,836
Prepaid expenses	31,492	108,805	63,590	77,294	93,951
<b>Total Current Assets</b>	<b>1,354,164</b>	<b>1,119,597</b>	<b>8,266,764</b>	<b>23,526,318</b>	<b>28,065,227</b>
					-
<b>Capital Assets</b>	<b>217,712</b>	<b>305,521</b>	<b>724,546</b>	<b>918,135</b>	<b>1,282,819</b>
Technology rights and licenses	219,820	-	-	-	-
<b>TOTAL ASSETS</b>	<b>1,791,696</b>	<b>1,425,118</b>	<b>8,991,310</b>	<b>24,444,453</b>	<b>29,348,047</b>

## **LIABILITIES & SHAREHOLDERS' EQUITY**

### **Current liabilities**

Accounts Payable and Accrued Liabilities	769,845	690,571	689,735	1,286,250	1,987,798
Deferred Revenues	-	-	132,972	238,931	495,447
Obligation under capital lease	-	-	15,943	8,322	4,344
<b>TOTAL CURRENT LIABILITIES</b>	<b>769,845</b>	<b>690,571</b>	<b>838,650</b>	<b>1,533,503</b>	<b>2,487,589</b>

Funds received in advance from shareholder

	-	-	-	-	-
<b>TOTAL LIABILITIES</b>	<b>769,845</b>	<b>690,571</b>	<b>838,650</b>	<b>1,533,503</b>	<b>2,487,589</b>

### **Shareholders' Equity**

Share capital	8,041,123	9,804,387	20,620,778	35,988,278	35,988,278
Surplus (Deficit)	(7,019,272)	(9,069,840)	(12,468,118)	(13,077,328)	(9,127,820)
<b>TOTAL SHAREHOLDER EQUITY</b>	<b>1,021,851</b>	<b>734,547</b>	<b>8,152,660</b>	<b>22,910,950</b>	<b>26,860,458</b>
<b>TOTAL LIAB &amp; SHAREHOLDER EQUITY</b>	<b>1,791,696</b>	<b>1,425,118</b>	<b>8,991,310</b>	<b>24,444,453</b>	<b>29,348,047</b>

## APPENDIX C

### Financial Statements

(continued)

**INTRINSYC SOFTWARE INC.**  
**Consolidated Stmt of Cash Flows**  
 In Canadian Dollars

	1998A	1999A	2000A	2001E	2002E
<b>Operating Activities</b>					
Net Income (Loss) for the year	(3,874,376)	(2,050,568)	(3,398,278)	(609,210)	3,949,508
Add back non cash items:					
Depreciation and amortization	257,320	295,938	128,980	369,225	624,945
Expenses settled w/issuance of common shrs:					
For services rendered	-	306,710	294,711	-	-
For compensation expense	-	51,931	46,238	-	-
Net Change in non-cash working capital	84,532	(477,546)	(28,711)	(296,716)	(1,721,374)
<b>Cash from operating activities</b>	<b>(3,532,524)</b>	<b>(1,873,535)</b>	<b>(2,957,060)</b>	<b>(536,701)</b>	<b>2,853,080</b>
<b>Financing Activities</b>					
Proceeds from issuance of share capital					
Issuance of common stock:					
Private placements	950,297	896,619	900,000	-	-
Special Warrants	1,931,073	-	5,438,493	-	-
Warrants	1,347,137	352,334	1,838,244	2,812,500	-
Options	180,053	155,670	2,298,705	-	-
Proceeds from the issuance of special warrants	-	-	-	12,555,000	-
Share Subscription receivable	-	-	-	-	-
Funds received in advance of share issuance	-	-	-	-	-
Advances to Annabooks Software	(172,965)	-	-	-	-
Advances from shareholders	-80000	-	-	-	-
Repayment of obligation under capital lease	-	-	(15,943)	-	-
	4,155,595	1,404,623	10,459,499	15,367,500	-
<b>Cash flows from investing activities:</b>					
Purchase of capital assets	(137,519)	(163,927)	(516,119)	(562,814)	(989,630)
Purchase of Other Assets	-	-	-	-	-
	(137,519)	(163,927)	(516,119)	(562,814)	(989,630)
<b>Increase (decrease) in cash</b>	<b>485,552</b>	<b>(632,839)</b>	<b>6,986,320</b>	<b>14,267,985</b>	<b>1,863,450</b>
Cash, beginning of period	349,067	834,619	201,780	7,188,100	21,456,085
Cash, end of period	834,619	201,780	7,188,100	21,456,085	23,319,535

## APPENDIX D

### Comparison of Selected Company Valuations

	Stock Ticker	Share Price	Market Capitalization (mm)	F2001E Revenue (mm)	Mkt Cap/Rev F2001E	F2002E Revenue (mm)	Mkt Cap/Rev F2002E
Red Hat*	RHAT	\$11.56	\$1,849.00	\$83.17	22X	\$157.60	12X
Akamai*	AKAM	\$49.13	\$5,226.50	\$245.67	21X	\$261.85	20X
Liberate Technologies*	LBRT	\$17.13	\$1,764.38	\$41.21	43X	\$65.23	27X
Micromuse*	MUSE	\$131.50	\$4,562.26	\$212.10	22X	\$327.00	14X
Inktomi*	INKT	\$48.81	\$5,565.84	\$460.35	12X	N/A	N/A
Resonate Software*	RSNT	\$42.93	\$1,157.66	\$41.03	28X	N/A	N/A
<b>Average</b>					<b>25X</b>		<b>18X</b>

\* US dollars, based on closing prices of Friday Nov. 10/00

<b>Intrinsyc (Cdn\$)</b>	<b>ICS</b>	<b>\$4.49</b>	<b>\$173.00</b>	<b>\$10.09</b>	<b>17X</b>	<b>\$20.83</b>	<b>8X</b>
--------------------------	------------	---------------	-----------------	----------------	------------	----------------	-----------

Red Hat is a leader in development, deployment and management of Linux and open source solutions for Internet infrastructure ranging from small embedded devices to high availability clusters and secure web servers. Red hat is the principle provider of GNU-based developer tools and support solutions for a wide variety of embedded processors. ([www.redhat.com](http://www.redhat.com))

Akamai provides global Internet content delivery service that improves Web site speed and reliability and protects against Web site crashes due to demand overloads. The company's technologies help to optimize Web site performance, deliver broadcast-caliber streaming media, and provide interactive application services. ([www.akamai.com](http://www.akamai.com))

Liberate Technologies provides standards-based software that serves as a platform for the delivery of Internet-enhanced content and applications to a variety of information appliances, such as television set-top boxes, game couplers, smart phones, and personal digital assistants. The Company's software is used by telecommunications companies and Internet service providers. ([www.liberate.com](http://www.liberate.com))

Micromuse is a leading provider of real-time fault and service-level management software. The company's Netcool suite helps telecommunications and Internet service providers ensure the uptime of network-based customer services and applications. ([www.micromuse.com](http://www.micromuse.com))

Inktomi develops and markets scalable software applications designed to enhance the performance and intelligence of large-scale networks. The company's systems use parallel-processing technology across clusters of workstations to deliver the speed and performance while utilizing smaller workstations. Inktomi's mission is to build scalable software applications that are core to the Internet infrastructure. ([www.inktomi.com](http://www.inktomi.com))

Resonate Software develops and markets software products and services that ensures the availability and performance of eBusiness applications. The company's family of software products is a platform that integrates enterprise traffic management and systems management capabilities, which provide real-time monitoring, reporting, and automated service level control of eBusiness applications. ([www.resonate.com](http://www.resonate.com))

Source: Bloomberg and Corporate Websites



## APPENDIX E

### Intrinsyc Progress

In our last research report (dated April 19/2000), we outlined a number of strategic objectives for Intrinsyc by which we would evaluate the company's long-term growth potential.

Objective Set	Evaluation of Progress to Date	Proof
<b>1. Extend Channel Partnerships:</b> To fully maximize revenue potential, the development of alternate channels of distribution is crucial. Channel partners give access to a broader customer base and provide an element of credibility.	Met Expectations	Since our last report, Intrinsyc has established several attractive channel partnerships such as: <ol style="list-style-type: none"> <li>i. <i>Embedded Planet</i>, a leading provider of the Motorola PowerPC™ platforms to the embedded market.</li> <li>ii. <i>MontaVista</i>, the developer of the Hard Hat™ Linux operating system for embedded applications.</li> <li>iii. <i>Lineo Inc.</i>, a well regarded provider of embedded Linux systems software.</li> </ol>
<b>2. Enhance its O/S Independence:</b> To truly be a "customer-focused solution provider", it is important that Intrinsyc be able to solve customer problems, irrespective of choice of operating system.	Exceeded Expectations	We viewed this as a longer-term goal, and yet in the past several months Intrinsyc has made major progress on this front. Specifically, Intrinsyc has: <ol style="list-style-type: none"> <li>i. Unveiled its Linux-based CerfBoard hardware reference platform, enabling customers to develop Linux-based Internet devices; and</li> <li>ii. Introduced a new networking technology that links Linux-based devices to Windows enterprise systems.</li> </ol>
<b>3. Achieve Run-time Licensing Agreements:</b> Growth in the number and size of licensing agreements within the company's revenue mix is important for Intrinsyc. Run-time licensing is a high-margin source of revenue for the company.	Met Expectations	The company has had success in landing customer contracts that contain a portion of run-time licensing. Longer-term, we would like to see the percentage of run-time licensing to total sales increase. The most noteworthy customer wins that contain some run-time licensing include: <ol style="list-style-type: none"> <li>i. <i>Ford</i>; and</li> <li>ii. <i>Siemens</i>.</li> </ol>

### Conclusion

- ♦ Intrinsyc has made impressive progress on the strategic objectives we outlined in our April report.
- ♦ Based in part on this progress, we estimate the company is positioned to realize revenues of \$10 million in 2001 and \$20 million in 2002.



## **LOEWEN, ONDAATJE, McCUTCHEON LIMITED**

Hazelton Lanes, East Tower,  
Suite 2250, 55 Avenue Road,  
TORONTO, Ontario M5R 3L2  
Tel: (416) 964-4455 OR 1-800-567-1566  
Fax: (416) 964-4490

### **CANADIAN OFFICES**

#### **MONTREAL**

1200 McGill College Avenue, Suite 1900,  
MONTREAL, Quebec, H3B 4G7  
Tel: (514) 393-4600  
Fax: (514) 879-9067  
Toll Free: 1-800-361-8535

#### **CALGARY**

1070 Bow Valley Square 4  
250 Sixth Avenue SW  
CALGARY, Alberta, T2P 3H7  
Tel: (403) 299-9830  
Fax: (403) 299-9850  
Toll Free: 1-888-607-1737

**MEMBERS:** Toronto, Montreal, and Canadian  
Venture Exchanges, Investment Dealers  
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### **INTERNATIONAL OFFICES**

#### **PARIS**

16-18 avenue George V, 75008  
PARIS, France  
Tel: 011 (33) 1-40-73-81-00  
Fax: 011 (33) 1-49-52-04-72 Telex: 610152

#### **GENEVA**

42, rue du XXXI Decembre  
1207 GENEVA, 6<sup>th</sup> Floor  
GENEVA, Switzerland  
Tel: 011 (41) 22-718-3500  
Fax: 011 (41) 22-700-4050

## **LOEWEN, ONDAATJE, McCUTCHEON USA LIMITED**

Hazelton Lanes, East Tower,  
Suite 2250, 55 Avenue Road,  
TORONTO, Ontario M5R 3L2  
Tel: (416) 964-4455  
Fax: (416) 964-4490

**MEMBERS:** National Association of Security Dealers  
and Securities Investor Protection Corporation

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