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***SECOND DRAFT***

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## MAJOR INVESTMENT FACTORS

### Pros

- + Aerotelesis has unique access to what appears to be a groundbreaking communications protocol—USM™**
- + This technology has the potential to become the new standard for next generation broadband wireless and satellite-based networks**
- + Ideally transmits over 50 times more throughput per bandwidth unit than the latest GSM and CDMA technologies; over 35 times more efficient than the fastest versions of 802.11**
- + Supports high-speed and high-capacity networks at substantially lower costs relative to existing wireless technologies**
- + A large market opportunity seems to exist in view of the multiplicity of present wireless applications that appear to use less efficient transmission methods**

### Cons

- The Company needs immediate capital to shore up its balance sheet, complete its crucial North American license requirement and conduct a large-scale test with a major satellite operator**
- Some major hardware transition issues will need to be thoroughly mapped out before this technology can be implemented and sold as an end product**
- A large number of shares issued in connection with a convertible debenture offering currently overhangs the market**



## **Business Description**

- aeroTelesis, Inc. is a technology company based in Los Angeles, CA that is dedicated to deploying and implementing Photron Technologies, Ltd's Ultra Spectral Modulation™ (“USM™”) related products and services which enhance bandwidth efficiency for major satellite operators an exclusive licensing agreement.
- aeroTelesis, through the USM technology, intends to provide major satellite operators, system integrators, and service providers an ability to lower their ongoing capital expenditures by increasing the utilization of their current bandwidth by a factor of 10 times or more which will allow satellite providers to bundle voice, data and video and make them more competitive with cable (fiber optic) providers.
- aeroTelesis intends to create strategic partnerships with major satellite operators whereby they provide the USM technology capability and support and the satellite operator provides the sales, marketing, distribution, installation and customer support for its clients. aeroTelesis intends to receive revenue sharing from satellite partners.
- aeroTelesis's website is <http://www.aerotelesis.com>

## **USM Technology Background**

- The USM engineering team at Photron and its technology partner, Accelchip ([www.accelchip.com](http://www.accelchip.com)) which was recently acquired by Xilinx, Inc.(NASDAQ: XLNX), are completing the final chip language conversions and the chip architecture to build the 1<sup>st</sup> generation USM chip this year.
- The final stages of implementation will utilize FPGA's (Field Programmable Gate Arrays) as the hardware platform. This final stage completes the transition from simulations to hardware functionality while confirming the successful application of a unique digital filter developed during 2005. An FPGA is a semiconductor that contains programmable logic. FPGAs can be used in a variety of functions including basic logic, decoding and math functions. FPGAs can be programmed after they are manufactured, hence the name “field programmable.” Compared to other chipsets, FPGAs are larger, slower, and draw more power. FPGAs are usually a first step because they allow designers shorter development times and the ability to re-program to fix bugs.
- The completion of the hardware demonstration will potentially show USM to be the first communications technology to achieve its target data transmission rates of 100bps/Hz. Transmission rates at this speed violate The Shannon limit which describes the capacity of a communications channel and the theoretical maximum information transfer rate of the channel.



- USM was first tested using a MATLAB simulation where the technical team demonstrated a data transmission speed of 100 bits per second (5 Mbps in a 50 KHz channel). Upon the conversion from MATLAB to HDL (hardware design language), the team was able to achieve the same performance in the first USM hardware circuit board using FPGA chips. This hardware performance was third party verified by AccelChip.
- Today, the final transition from HDL to RTL (real time language) is being finalized with some minor modifications to be completed between now and the end of Q2. The RTL library is the final chip language that is to be provided to the ASIC (Application-Specific Integrated Circuit) chip design house to create the GDS II language library for implementation into the 1<sup>st</sup> generation USM chip. An ASIC is an integrated circuit designed for a specific purpose instead of general use like most integrated circuits. Because ASICs are hardwired for specific use, they do not incur system resource overhead like general-purpose integrated circuits such as microprocessors.

## **IP Position**

Photron owns all of the intellectual property related to USM. Photron has 10 to 12 patents pending and is working with lead patent attorney Dorsey Whitney in Palo Alto. aeroTelesis has the exclusive right to acquire USM licenses from Photron for satellite based applications and pays Photron a fee for a country or region license. aeroTelesis owns the USM license for the Philippines for a term of 10 years, which renewable in 5 year terms. The Company is in the process of updating overall USM licensing agreements and expects to complete this process by end of 2<sup>nd</sup> quarter of 2006.

## **Competition**

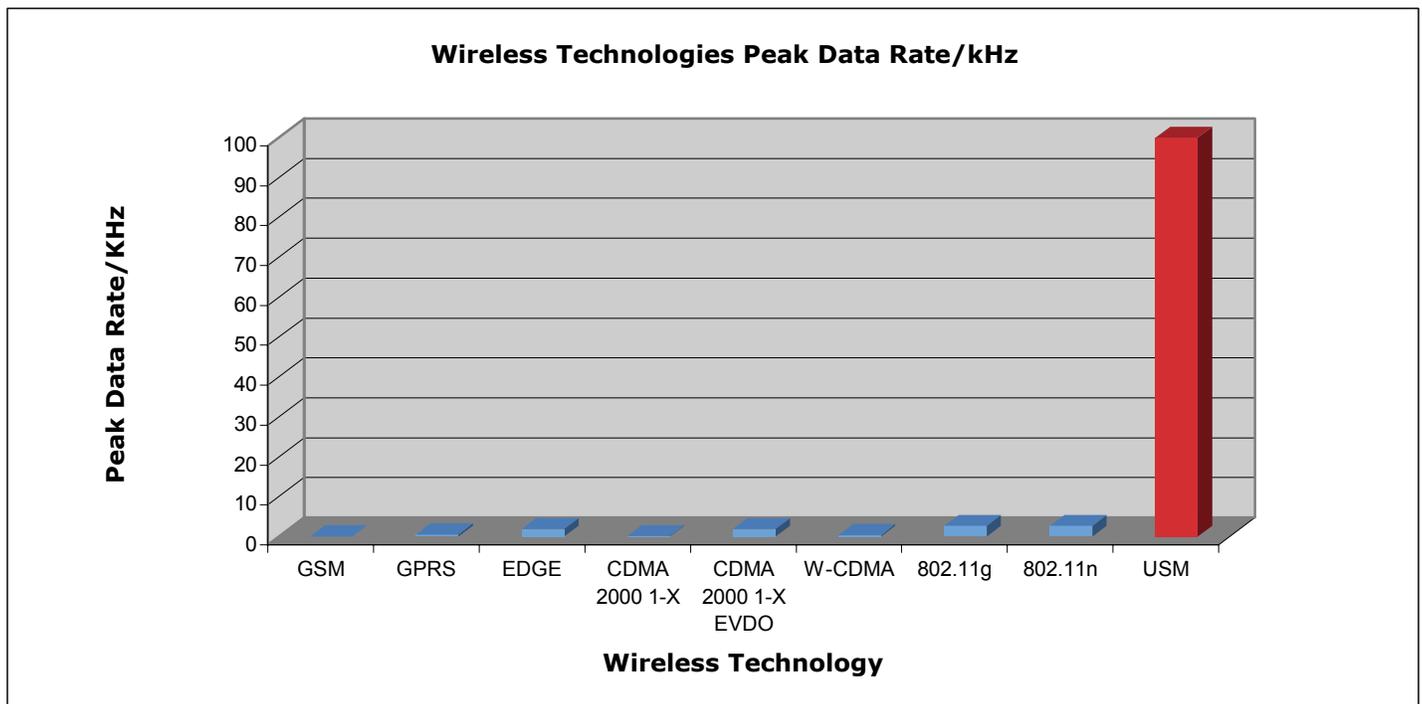
To date, no chip maker has been able to violate The Shannon limit. The Shannon limit or Shannon capacity of a communications channel is the theoretical maximum information transfer rate of the channel. Current bandwidth enhancement technologies such as CDMA and GSM are subject to The Shannon limit whereas USM is not, thus aeroTelesis has no true competition.



## Q & A

### Q. What is USM™?

**A.** It is a radically different modulation technology that enables ultra narrowband channels to achieve essentially broadband throughput capabilities. Data transmission rates using USM™ far exceed any other technology in use today, as shown in the chart below. Economically speaking, by means of USM™, limited bandwidth may be enhanced to add substantially more subscribers and services through existing networks.



Courtesy: Vista Partners

### Q. Has this technology been shown to work?

**A.** Yes, but on a limited basis. A successful end-to-end simulation has demonstrated the feasibility of the core technology. A transition to hardware functionality is now in its latter stages. A full-scale test in conjunction with a large satellite operator is the next logical step, and is in the works pending completion of financing requirements.



**Q. Does aeroTelesis own this technology?**

**A. No. USM™ is owned by Photron Technologies, Ltd., a privately-held company specializing in the development of next-generation wireless innovations. Besides being a strategic partner with aeroTelesis, the principals of Photron are majority shareholders of Nations Mobile Networks Ltd., which is the majority owner of aeroTelesis. The Company has the exclusive license from Photron to distribute USM-related products on a global basis.**

**Q. Are there patents protecting USM™?**

**A. Yes, patents have been filed at the U.S. Patent Office. The two published patent applications are numbered 20060098755 and 20060098756, and may be read at the following link: <http://appft1.uspto.gov/netahtml/PTO/srchnum.html>**

**Q. Doesn't the Shannon-Hartley Theorem establish an upper limit of error-free digital data that can be transmitted within a specified bandwidth in the presence of noise interference. which is considerably lower than that claimed by USM™?**

**A. This theorem has been a staple of information theory for almost 60 years and assumed to be universally true. However, Photron's scientists found that they could design a new waveform that substantially increased data transfer rates by designing a correct mix of electrical impulses from two separate of wave modulations.**

**Q. After hardware and chipset functionality are completed how will aeroTelesis produce revenues from its USM™ involvement?**

**A. aeroTelesis expects to develop strategic partnerships with major satellite operators, under which it would furnish USM™ capability and support. The satellite operators would in turn provide sales, marketing, distribution, installation, and customer service to its subscribers. The Company would receive a share of the revenues from its satellite partners and would pay Photron a 10% royalty on such income.**

**The diagram on the next page illustrates the Company's business model.**



**Consumer**

- Pays monthly subscription fee for satellite TV services to Satellite Partner
- Equipment is included with 1 year subscription or can be purchased



**Satellite Partner**

- Provides sales, marketing, distribution, & customer service capabilities
- Receives monthly subscription fee for satellite TV services
- Pays aéroTelesis™ a revenue share for deploying USM™
- Subsidizes equipment costs (Set Top Box)



**aéroTelesis™**

- Receives revenue sharing from Satellite Partners
- Pays PHOTRON™ a % of the Revenue Sharing from Partner



**PHOTRON™  
Technologies**

- Receives revenue sharing from aéroTelesis™
- Receives revenue from sales of Set Top Box



**Capital Needs**—Initially, aeroTelesis needs to raise \$1.5 to \$2.0 million. About \$700k of this amount would be used to pay down its licensing agreement with Photron for use of USM™ technology throughout North America. In turn, Photron, in conjunction with its strategic partner, the AccelChip subsidiary of Xilinx, will use the lion's share of this fee to complete the final chip language conversions and chip architecture to build the first generation USM™ ASIC chip (Application-Specific IC). The remainder would be used for working capital.

By the time the initial USM™ chip is produced, it is likely that the stock of aeroTelesis would have appreciated significantly from currently depressed levels in anticipation of this milestone. If so, we project that at that time the Company would do a second tranche financing in the neighborhood of \$8.0 to \$10.0 million. This capital would provide for testing the ASIC for such things as the bit failure rate, the signal to noise ratio, chip sensitivity and noise indifference. Once this work has been successfully completed, aeroTelesis would be in position to select an OEM partner to build an earth station to work with a satellite transmitter; and conduct a full-scale validation test with a major satellite operator. Photron's part in this process would require an additional \$1.0 million payment. Another \$4.0 million or so would be used to retire the convertible debenture issue that is overhanging the stock.



## INVESTMENT CONCLUSION

Despite being a public equity, aeroTelesis is really a late stage venture entity. There is no sensible way at this point of coming up with sales and earnings projections. *If* the technology works as indicated, and *if* the Company can convince satellite operators to adopt the USM™ technology—two rather large “ifs”—the possibilities are certainly open ended. Substantial financing needs and probable delays in the implementation of the technology are further considerations for potential investors. At \$0.11, the shares are not discounting much of a future for aeroTelesis; poor market conditions and the debenture overhang are major factors currently impacting their price. But, in our opinion, should the USM™ technology gain traction in the wireless marketplace, we believe that aeroTelesis could provide impressive capital gains over a 3-to-5 year time horizon.

