

Broadband Technology Opportunities Program

Comments of Accell Systems, Inc.

Accell Systems, Inc. (Accell) is a start-up telecom equipment company. Our patented, noise filtering technology, Nexus, increases the data throughput of DSL lines by up to 3x, extends their range by up to 2x, and reduces transmission errors by up to 95 percent. As a result, Nexus increases carrier revenues, produces measureable cost savings, and enhances the quality of service, including IPTV signals.

At 30,000 feet from the Central Office (CO), Nexus has been proven to deliver ADSL at a speed of 800 kbps. Therefore, this technology can play a crucial role in assisting carriers to achieve a major purpose of the Broadband Technology Opportunities Program (BTOP), that is, to accelerate the deployment of broadband in unserved and underserved areas. We believe that further development of Nexus can result in at least an order of magnitude in performance improvement.

The BTOP can enable Accell to play a role in meeting its statutory purpose by making clear that technology companies such as Accell can qualify for NTIA grants as an "infrastructure provider." Unfortunately, our ability to market, sell and further develop Nexus is presently severely limited by our lack of resources. We are further limited by the lack of the availability of investment capital in the current economic climate. Moreover, we are ineligible to receive loans from the SBA.

Our initial product is a multi-port, ADSL 2 plus capable, electronic circuit. Nexus is built with off-the-shelf, discrete electronic components, thereby making it inexpensive to manufacture, resulting in price points that should make it an easy purchase decision for carriers. Unlike other products which purportedly can increase DSL speed or extend its reach, such as costly and electronically complex repeaters, Nexus is installed in the CO or at remote nodes, not deployed as a generally unwanted outdoor plant device.

Moreover, in stark contrast to competitive products, it is easy to install; does not interrupt service; and does not need continuing maintenance. A versatile product, it may be attached to any existing or new DSLAM, or it may be connected to a distribution frame. Going forward, our plan is produce Nexus as a chipset capable of providing much greater performance improvements for ADSL/ADSL2 plus lines, as well as those operating at VDSL and VDSL2 frequencies and speeds.

Proof of concept has been achieved. After passing all beta tests, we have fulfilled the original revenue-generating order and a re-order from New York based Ontario & Trumansburg (O&T). New Zealand Telecom has recently completed initial customer field testing, with impressive results, and leading rural LECs Century Tel/Embarq and Consolidated Communications have commenced field tests. Testing is also currently under discussion with Fairpoint Communications, which recently purchased 1.5 million rural access lines from Verizon to extend broadband coverage in Maine, New Hampshire and Vermont.

Nexus allows providers to increase their DSL subscriber and revenue base by extending distant telephone lines and reconditioning poor quality access lines. Even where fiber will be extended to the

neighborhood, as contemplated by AT&T with its U-Verse service, Nexus will dramatically drive down the costs of these so-called fiber-to-the-node (FTTN) projects, by greatly reducing the number of expensive remote placements necessary to provide DSL to a typical distribution area.

Simply put, Nexus leverages and unlocks the hidden value of the extensive existing copper infrastructure to achieve broadband deployment in a manner that other alternatives such as fiber and wireless do not. Nexus achieves this by solving a technical problem which is inherent in all copper lines – the presence of performance-limiting noise appearing as electromagnetic interference and crosstalk.

Since virtually all fixed access lines worldwide are imperfect and unbalanced, nearly all of them are susceptible to noise, which not only negatively impacts the performance of voice and data signals, but also video signals. Noise is especially a problem in U.S. rural and some suburban areas, where residential lines often extend far from a Telco's Central Office (CO). Up to 20% of all DSL lines in the U.S. and 35% of rural access lines are too distant for DSL. A short technology review of Nexus is attached as Exhibit A.