

**Higher Education's Perspective:  
The need for more and better unlicensed spectrum**

- I. **Introduction: Faster, better and more affordable broadband access** is critical to our current mission and to where we want to take education in the future. Wireless solutions operating on unlicensed spectrum contribute significantly to this goal.
  
- II. **In the Community:**
  - a. **Surrounding community:**
    - i. Many colleges and universities are **located in rural areas** where they are technologically savvy islands surrounded by communities that have little or very mixed access to quality broadband
    - ii. Faculty, staff and students increasingly **live off-campus**, in the community, and need to access materials and do their work over a public network.
    - iii. **Community outreach** is part of the mission of many of our institutions. Wireless broadband access is a unique opportunity for partnerships between campuses and communities, to leverage society's investment in education facilities, and use their expertise to aid in economic development.
    - iv. **Distance and time:** More and more students are taking classes and conducting research "at a distance" on their "own time": access to broadband in many rural areas may only be feasible if done wirelessly over unlicensed spectrum
  
- III. **On the campus:** performing the business of education
  - a. **Same need as a municipality:** safety, governance, communications, transactions, access to its citizens
  - b. **Same cost concerns:** wireless connection is 1/10<sup>th</sup> the cost of a wired connection; devices that operate on unlicensed bands are mass market and therefore less expensive by several magnitudes
  - c. **High demand:** students are early adopters, and discard legacy technology quickly. They come to campus with many assorted wireless devices (i.e. cell phones replacing wired lines); they demand mobility and flexibility in time and space... they experiment with new and demanding applications... **they innovate... and they keep the IT departments on their toes!**
  
- IV. **As educators:** faculty are increasingly using handheld portable devices to change the way they teach and conduct research.
  - a. **Allows interactive discussion:** any time, any place

Notes for NAF Congressional Briefing on Spectrum

September 20, 2006

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- b. Accommodates different learning styles:** show it, tell it, model it, write it, problem solve with it
  - c. Makes resources available:** virtual field trips, Internet content, videos, breaking news
  - d. Prepares students for the work world:** where it will be assumed that they have the latest IT skills (i.e. interns as office tech experts)
  
- V. Conclusion: Why do we need more quality, unlicensed spectrum?**
  - a.** It works! It is a proven commodity
  - b.** It is in such demand that we need more (many campuses are already experiencing congestion problems)
  - c.** Higher quality spectrum means fewer access point... less money... longer reach... better applications