

## **6.978J / ESD.68J Midterm Paper Assignment: Deconstructing a Policy Document**

**Handed out:** February 28, 2006

**Due:** March 23, 2006

**Expected length:** Maximum 5 pages

In 2004, in a proceeding that remains ongoing (i.e., the FCC has not yet issued an order), the FCC proposed allowing unlicensed radios to use unused broadcast TV channels – so-called “white space” spectrum. The FCC’s Notice of Proposed Rulemaking (NPRM) that sets forth what the FCC is proposing to do is in docket ET 04-186. (FCC orders related to this proceeding are available at: [http://wireless.fcc.gov/spectrum/proceeding\\_details.htm?proid=369](http://wireless.fcc.gov/spectrum/proceeding_details.htm?proid=369).)

In the introduction to the NPRM, the FCC argues as follows:

1. By this Notice, we propose to allow unlicensed radio transmitters to operate in the broadcast television spectrum at locations where that spectrum is not being used. We believe that the proposals set forth herein would provide for more efficient and effective use of the TV spectrum and would have significant benefits for the public by allowing the development of new and innovative types of unlicensed broadband devices and services for businesses and consumers. Further, new unlicensed broadband operations may provide synergy with traditional broadcast operations and offer broadcasters the opportunity to provide new services. In addition, because transmissions in the TV band are subject to less propagation attenuation than transmissions in the spectrum where existing broadband unlicensed operations are permitted, allowing unlicensed operation in the TV bands could benefit wireless internet service providers (WISPs) by improving the service range of their existing operations, thereby allowing WISPs to reach new customers.

2. We recognize that broadcasters are currently undergoing a transition to digital operation, during which channel availability is likely to change more frequently. Our approach will appropriately account for these changes. To ensure that no harmful interference to authorized users of the spectrum will occur, we propose to define when a TV channel is “unused” and to require these unlicensed devices comply with significant restrictions and technical protections. Unlicensed devices would be required to incorporate “smart radio” features to identify the unused TV channels in the area where they are located. We intend to consider several alternative methods for identifying the unused TV channels, including approaches that would: 1) allow existing television and/or radio stations to transmit information on TV channel availability directly to an unlicensed device; 2) employ geo-location technologies such as the Global Positioning Satellite (GPS) system; or 3) employ spectrum sensing techniques that would determine if the signals of authorized TV stations are present in an area.

This initiative, which was strongly supported by former FCC Chairman Michael Powell, has elicited strong reactions from industry participants. The 394 comments filed electronically to date in association with this docket are available at [http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch\\_v2.htm?ws\\_mode=retrieve\\_list&id\\_proceeding=04-186&start=1&end=394&first\\_time=N](http://gulfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/comsrch_v2.htm?ws_mode=retrieve_list&id_proceeding=04-186&start=1&end=394&first_time=N).

We have selected comments from three parties as being reasonably representative of different industry positions: the National Association of Broadcasters,<sup>1</sup> the Consumer Electronics Association, and the Wi-Fi Alliance. *Your assignment* is to (1) review these comments and (2) write a paper of **no more than 5 pages** that compares and contrasts these comments, giving specific consideration to the following questions:

1. What position does the stakeholder take and why?
2. What approach does the stakeholder take to evaluate the merits of the technical design alternatives (the “methods” in paragraph 2 above) that the FCC proposes for determining what spectrum is unused?
3. Conclude by reflecting briefly on the implications of your answers to questions 1 & 2 for the development and selection of technical design approaches within a politically contested context.

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<sup>1</sup> In addition to the comments provided, two attachments to the NAB submission are available at the FCC website, but are not required reading.