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7 **IEEE LAUNCHES 802.22.1™-2010 REVISION PROJECT ON ADVANCED**
8 **BEACONING TO ENABLE SPECTRUM SHARING AND FACILITATE OPENING UP**
9 **OF NEW 2 GHz – 4 GHz SPECTRUM FOR FIXED AND MOBILE WIRELESS**
10 **BROADBAND APPLICATIONS**

11 ~~**IEEE LAUNCHES NEW IEEE 802.22.1™-2010 REVISION PROJECT ON ADVANCED**~~
12 ~~**BEACONING TO ENABLE SPECTRUM SHARING IN THE 2 GHz to 4 GHz BAND**~~
13 ~~**AND OPEN UP NEW SPECTRUM TO SUPPORT WIDE VARIETY OF**~~
14 ~~**APPLICATIONS**~~
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16 **PISCATAWAY, N.J., USA, XX March 2013** – IEEE, the world's largest professional
17 organization advancing technology for humanity, today announced that it has authorized
18 the revision project to add advanced beaconing capabilities to the IEEE Std.
19 802.22.1™-2010 to enable spectrum sharing in the 2 GHz to 4GHz band and
20 facilitate opening up of new spectrum to support a wide variety of wireless applications.
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22 “Such a standardized advanced beacon is an innovative way to enable spectrum
23 sharing in many bands and for many innovative applications,” said Dr. Apurva N. Mody,
24 chairman of the IEEE 802.22™ Standards Working Group.
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26 This revision project was introduced to support the United States President’s Council of
27 Advisors on Science and Technology (PCAST) report promoting the sharing and more
28 efficient use of spectrum through new cognitive radio technologies and interference
29 mitigation techniques to make 500 megahertz of new spectrum available for fixed and
30 mobile wireless broadband.
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32 Currently, a database service approach has been proposed to communicate information
33 about, exclusion zones to protect U.S. Navy coastal operations and other Department of
34 Defense (DOD) test and training areas. Such an approach may deprive significant US
35 population from enjoying this newly available spectrum.
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37 However, beaconing approaches, such as the one developed in IEEE Std. 802.22.1-
38 2010 originally designed for interference protection of licensed wireless microphones
39 may be used for these bands. Such an advanced beacon will could be transmitted by
40 the primary users in these bands to enable semi real time and dynamic spectrum
41 sharing and make this spectrum available nationwide, and especially in the significantly
42 populated coastal areas.

43 ~~with existing radars and fixed satellite earth stations. This revision project was~~
44 ~~introduced to support the United States President’s Council of Advisors on Science and~~
45 ~~Technology (PCAST) report promoting the sharing and more efficient use of spectrum~~
46 ~~through new cognitive radio technologies and interference mitigation techniques.~~

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2 ~~“Such a standardized advanced beacon is an innovative way to enable spectrum~~
3 ~~sharing in many bands and for many innovative applications,” said Dr. Apurva N. Mody,~~
4 ~~chairman of the IEEE 802.22™ Standards Working Group.~~

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6 ~~In June 2010, the President of the United States signed a memorandum calling for the~~
7 ~~National Telecommunications and Information Administration (NTIA), in collaboration~~
8 ~~with the Federal Communications Commission (FCC), to make 500 megahertz of~~
9 ~~spectrum available for fixed and mobile wireless broadband.~~

10 ~~One of the portions of the spectrum identified to achieve this goal is the S-Band (2000-~~
11 ~~3700 MHz) where radars have been deployed. The current plan is to use database~~
12 ~~service driven operation, which will enforce large exclusion zones along the United~~
13 ~~States coastline to protect U.S. Navy coastal operations and other Department of~~
14 ~~Defense (DOD) test and training areas. Such large exclusion zones will not allow the~~
15 ~~majority of the large American cities along the coast to gain benefits from this spectrum.~~

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17 ~~However, advanced beaconing approaches, such as the one developed in IEEE~~
18 ~~802.22.1-2010 originally designed for interference protection of licensed wireless~~
19 ~~microphones may be used for these bands. Such an advanced beacon will be~~
20 ~~transmitted by the primary users of these bands to enable real and semi-real time~~
21 ~~spectrum sharing and make 100 MHz of spectrum (3550 MHz — 3650 MHz) available~~
22 ~~nationwide, and especially in the significantly populated coastal areas. Such a~~
23 ~~beaconing approach allows spectrum sharing operation dynamically, which otherwise~~
24 ~~could not be supported through any other means easily.~~

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26 The IEEE 802.22 Working Group (WG), recipient of the IEEE Standards Association
27 (IEEE-SA) Emerging Technology Award, has completed and published the IEEE Std.
28 802.22-2011™ Standard on cognitive radio based Wireless Regional Area Networks
29 that provides broadband access to wide regional areas globally and bring reliable and
30 secure high-speed communications to under-served and un-served rural communities.

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32 The IEEE P802.22.1 Task Group is accepting calls for contribution from interested
33 participants for the development of this standard. Work on this project will begin
34 following the March 2013 IEEE 802® plenary session in Orlando, Florida.

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36 Additional information on the standard can be found at the IEEE-SA standards page. To
37 purchase IEEE 802.22 Standards, visit the [IEEE Standards Store](#).

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40 follow us on Twitter at <http://www.twitter.com/ieeesa> or connect with us on the
41 Standards Insight Blog at <http://www.standardsinsight.com>.

42 43 **About the IEEE Standards Association**

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45 IEEE, develops consensus standards through an open process that engages industry

1 and brings together a broad stakeholder community. IEEE standards set specifications
2 and best practices based on current scientific and technological knowledge. The IEEE-
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