Comments for IDA Consultation Paper on TVWS
By Power Automation
Kerk See Gim, sgkerk@pa.com.sg, H/P 96874908

Question 1:
IDA invites views on adopting a license-exempt approach for WSDs in Singapore, subject to the devices meeting the conditions set by IDA.

Supportive. We believe by adopting license-exempt approach for WSDs in Singapore could lower system operation cost for smart metering, load and demand management and result in larger market potential for energy management. This will bring lower costs in energy to households and

Question 2[i]:
IDA invites views on designating a restricted number of TVWS channels to support the deployment of services that require certainty of spectrum access.

Yes, there should a certain differentiation for services that are critical. In the case of energy management and demand response, certain loads from homes to substations or emergency loads will be tripped for balance of systems in a very short time and must be restored within a restricted time. Simply, these restricted channels can be dynamic but a certain guarantee level of connectivity is required for such emergency services like load shedding and power restoration.

Question 3[ii]:
In the event where IDA designates channels to support such services, IDA invites views on the appropriate regulatory approach in designating and managing these TVWS channels and the regulatory framework for the operations of prioritized WSDs.

We believe the channels can be given by priority marked in the database and in the concept of our SCADA system, we have different alarms with different priority. The mechanism must allow us to "take over" certain channels for such emergency applications at these reserve channels. It may be a waste of these channels if they are left reserved for too long but it can be only a small percentage of it and can be dynamically changed.

Question 4:
IDA invites views on allowing operation of WSDs in the 694 MHz – 806 MHz band until IDA allocates these frequencies for IMT deployment.

We support the use of the current band and any way to increase the number of channels and this will provide more options and ways to improve the flexibilty in using these channels.
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IDA should review this approach regularly and make more spectrum available whenever possible and necessary.

Question 5:
IDA invites views on adopting a database approach as the mandated method to access white space spectrum.

We support the use of database as well as any other options such as spectrum sensing. We always believe there should be alternative ways to improve the reliability of the system. Some devices are not always connected and may wake up only once in a while and having constant queries may not be viable for millions of devices for the grid. We should constantly consider different approach

Question 6:
IDA invites views on the proposed general requirements for the database query and registration.

Supportive

Question 7:
IDA invites views on the three situations in which a WSD must query the database. In particular, IDA invites views on defining 50m as the maximum distance that WSDs are allowed to move from its original location, without contacting the geo-location database.

No Comments.

Question 8:

IDA invites views on the output power transmission of WSDs as shown in Table 2.

> We support the current power levels. However at different locations and conditions, we must be able to allow different types of output power. E.g rural and offshore islands. We do believe we will have to manage off grid devices in some of the islands.

Question 9:

IDA invites views on allowing the Fixed Devices to have tunable output power that is capped at a maximum of 4Watts EIRP

> Supportive.

Question 10:

IDA invites views on the requirement of a Unique WSD Identifier and for this identifier to be based on standards developed by recognized standards organizations.

> Supportive

Question 11:

IDA invites views on the proposed maximum transmission level of 100mW EIRP for WSDs operating in channels adjacent to a local broadcast channel.

> Supportive..

Question 12:

IDA invites views on the proposed OOB emission limit of -56.8dBm, which will be imposed on WSDs operating in channels that are directly adjacent to a local broadcast service.

> Not supportive. We recommend it to be -30 dbm

Question 13:

IDA invites views on defining the OOB emission limits for WSD to WSD operations

> We would request IDA to relax the OOB emission limits for WSD to WSD operations. This sounds more reasonable instead of a one-size-fit-all approach.

Question 14:

IDA invites views on the proposed approach to manage coexistence between a WSD and the other secondary services within the TVWS channels.

> We are in line with the comments from SWSG group that Since the bandwidth for secondary users are smaller, they should occupy the same channel(s) when registering to the database so as to allow as many TVWS channels available as possible. There should also be a cap to the number of channels that could be used for such secondary services in order to encourage better optimized use of the spectrum.

Question 15:

IDA invites views on the proposed propagation model and parameters used to determine the maximum transmission power level of a WSD.

> No comments

Question 16:

IDA invites views on its proposal for the protection of license-exempt and licensed wireless microphones. IDA also invites views and comments on the optimal number of safe harbour channels required to ensure that license-exempt wireless microphones can continue to be used once WSDs are deployed.

> No comments

Question 17:

IDA invites views on the need to develop a registration process for users of license-exempt wireless microphones that require additional channels beyond the safe harbor channels.

> Yes, we are line with SWSG and support IDA's view on the need to develop a registration process for such access. The details should be studied by IDA's TSAC WG6 standardization group.

Question 18:

IDA invites views on whether the proposed demarcation zone approach is sufficient in terms of managing cross border interference issue and if there are any other factors IDA should consider.

> We are in line with SWSG and agree that an authorized database should be used to calculate the demarcation zone dynamically based on this noise floor guideline with an appropriate propagation model.

Question 19:

IDA invites views on the aggregate interference effect of WSD and whether any adjustment in terms of technical requirement is needed.

> Supportive

Question 20:
IDA invites views on using GPS as the method to determine location accuracy, and on whether 50m is a sufficient location accuracy requirement for the operation of WSDs.

> We support but believe that flexibility must be given on a case by case basis.

Question 21:
IDA invites views on allowing the manual input and internal storage of geographic coordinates for indoor Fixed Devices.

> Supportive

Question 22:
IDA invites views on the requirement of an approval process for the installer of indoor Fixed Devices and the necessary conditions for approval.

> Supportive

Question 23:
IDA invites views on the possible types of TVWS network topologies and use case scenarios.

> No comments

Question 24:
IDA invites views on the payment of fees for the use of database services.

> We are in line and of the view that we should let the market competition to determine the best charging regime.

Question 25:
IDA invites views on both approaches in managing the database (i.e. industry-managed or government-managed database).

> We support industry managed databases.

Question 26:
To better gauge the level of interest from the industry, IDA invites companies that are interested in developing and managing the database for Singapore to register its interest with us and share the following details:
i) Funding for database development and management (i.e. self-funded, cost recovery, etc)
ii) Business models considered when providing database services

iii) Possible fees involved for TVWS users

> No comments

Question 27:
IDA invites views on the proposed preliminary conditions for the operation and administration of the databases

> Supportive of list of preliminary condition, but what goes into the list is for further study by IDA TSAC WG6 standardization group.

Question 28:
IDA invites views on the proposed approach and communications protocols between the following:
i) WSD and IDA website containing the list of authorized database administrators
ii) WSD and the database

> We support the general flow of database access and recommend to let IDA TSAC WG6 look at the standardization aspect of the protocol and interfaces especially the security aspects.

Question 29:
IDA invites views on the proposed frequency of update for Time A validity and Time B validity.

> supportive

Question 30:
IDA invites views on requiring the adjustment of the value for Time A validity and Time B validity, and for this to be within the range of 6 to 24 hours.

> Supportive

Question 31:
IDA invites views on the benefits and costs of a requirement for WSD to report its operational parameters to the database.

> We suggest that reporting of WSD operational parameters should be optional but not mandatory, and IDA should allow the industry to figure out what is the best option to deal with this reporting.

Question 32:
IDA invites views on the benefits of including within the TVWS regulations a requirement for WSD to register its contact parameters to the database.

> Supportive. However, since most of the information will be repeated, it is suggested that this registration should be carried out during the initial stage or whenever there is a change in location.

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