Comments on ECC Deliverable "Draft ECC Report 375"

1 Sources

Entity: **Dynamic Spectrum Alliance, DSA**

Name of contributor: Martha Suarez
Martha.Suarez@dynamicspectrumalliance.org

2 General Comments

The Dynamic Spectrum Alliance welcomes the opportunity to submit comments on Draft ECC Report 375.

DSA expresses concerns regarding the methodology applied in some Monte Carlo studies, especially for WAS/RLAN as a victim. First, the simulations conflate time and space dimensions, aggregate all device types, and even model fixed access points as moving entities, while propagation parameters that should remain constant are instead being varied.

Additionally, the approach used to derive out-of-band (OOB) emissions in some studies relies on ACLR, defined as the ratio of the filtered mean power centred on the assigned channel frequency to the filtered mean power centred on an adjacent channel. This methodology is not consistent with the use of a spectrum emission mask, which would allow higher PSD per MHz decreasing in value from the frequency boundary between MFCN and WAS/RLAN. In contrast, ACLR values, as used in this report, set a constant value from the boundary for the PSD per MHz based on the MFCN channel bandwidth.

Furthermore, the studies do not consider scenarios where the MFCN user equipment is collocated with a victim WAS/RLAN device during a long period of time. As 80% of the MFCN traffic is expected to be indoor, MFCN UE would operate in close proximity to victim WAS/RLAN devices for an extended period of time affecting also the MFCN BS main beam orientation.

Studies also overlook the fact that real networks (such as enterprise, multi-dwelling, …) typically include multiple access points, thereby failing to provide meaningful insight into the potential impact of MFCN deployments on dense Wi-Fi networks.

DSA would like to highlight that the studies are limited to some specific MFCN parameters corresponding to a channel width of 100 MHz channels and do not assess larger MFCN bandwidths, such as the 200 MHz channels publicly announced by the mobile actors. Finally, fixed UEs operating at power levels up to 29 dBm (such as those used for fixed wireless access (FWA)) are not accounted for, and thus their impact on incumbents including WAS/RLAN is not clear.

3 Proposals related to the ECC Deliverables

Together with this response to the consultation, we present four attachments to be considered:

1. Edits to the draft ECC Report itself with comments and modifications on track changes;
2. Updated analysis for WAS/RLAN study 6, corresponding to attachment 20, considering the comment regarding the SEM and most up to date UE mask;
3. Updated analysis for WAS/RLAN study 7, corresponding to attachment 21, considering the comment regarding the SEM and most up to date UE mask;
4. Updated analysis on the rooftop heights for the city of Paris and presented in the report as Study 26. The analysis has been improved to take into account the feedback from stakeholders and extended to two further cities in France, i.e. Marseille and Lyon.

Comment number	Section number Clause	Paragraph Figure Table	Type of comment (General, Technical or Editorial)	Comment	Proposed change
DSA/1	0	NA	Technical/Editorial	More clarification added on the MFCN parameters + no mitigation measures studied for FSS DL	Consider the track changes modification on the attachment
DSA/2	1	2	Editorial	No adjacent band studies were performed for FS and FSS	Consider the track changes modification on the attachment
DSA/3	3.1.1		Editorial	Break the sentence	Consider the track changes modification on the attachment
DSA/4	3.1.4		Editorial	Create a new header	
DSA/5	3.1.4.1	4	Editorial	Paragraph language not aligned with agreed content for other services	Delete paragraph and replace by […]
DSA/6	3.1.4.1	NA	Editorial	Add new paragraph explaining the proposed way forward after WRC23 (AI 1.19)	Add new paragraph explaining the proposed way forward after WRC23 (AI 1.19)
DSA/7	3.1.4.1	Last	Editorial/genral	Modify the sentence and clarify whether it is correct to cite ongoing non published report	Consider the track changes modification on the attachment
DSA/8	3.2.1		General	Add reference to the EN 303 687	
DSA/9	3.2.2		General	Fixed service is above and below the U6 band	Fix it with appropriate text
DSA/10	4.1	Table 1, 4.3	Technical	Add reference to 1-O and 1-H BS type	Add reference to 1-O and 1-H BS type

DSA/11	4.1	Table 1, 4.4	Technical	Spurious emission	Take into account the comment in balloon
DSA/12	4.1	Table 1, Note 0	Technical	Explain what the different types of BS are	Explain what the different types of BS are
DSA/13	4.1	Table 1, Note 3	General	Specify no studies were done with 200 MHz	Specify no studies were done with 200 MHz
DSA/14	4.1	Table 2	General	Align title with the specification text	Align title with the specification text
DSA/15	4.1	Text below table	General	Clarification provided in line 4.3 + comments on spurious + text to introduce the UE mask table	Track changes and comment to be considered
DSA/16	4.1	Table 3	Technical	Replace with new table	Track changes
DSA/17	4.2.1	All	General	Is this section still needed ?	
DSA/18	4.2.2	Second “Note for Table 5”	Editorial	Updated to reflect updated results of the analysis based on three cities.	From: “For future considerations, regarding the "below rooftop base station antenna deployment" parameter, an analysis in section X showed that for one city, up to 99% of 3.5 GHz BS may be above the local building heights.” To: “For future considerations, regarding the "below rooftop base station antenna deployment" parameter, an analysis in section 6.26 showed that for three European cities, up to 96% of 3.5 GHz BS may be above the local building heights.”
DSA/19	5.3.1	Table 10	General	Delete carriers not studied	
DSA/20	5.3.2	1	General	Indicate WRC 23 for the protection criteria	

DSA/21	5.5.1	1	General	These parameters were liaised	
DSA/22	5.6	1	General	Is this section needed ?	
DSA/23	6	1	General	What are the mitigation measures ?	
DSA/24	6.2	All	Editorial	Improvements	Track changes
DSA/25	6.3.3.3	All	General + Technical	Add new paragraph	
DSA/26	6.5	All	General + technical	Explain % of time randomisation + add explanations fro table 26 and explain why results are similar to other studies while no clutter loss is applied	Explain % of time randomisation + add explanations fro table 26 and explain why results are similar to other studies while no clutter loss is applied
DSA/27	6.8	All	General + Technical	Clarifications needed	See comments
DSA/28	6.9.6	Last	General	Agreement is no regulatory conclusion to be made	Agreement is no regulatory conclusion to be made
DSA/29	6.11.3	3	Technical	There is no reason to justify the fixed 50% case. The RAS needs to be protected for all propagation mechanims. Monte carlo study shall randomize the time percentage.	

DSA/30	6.12.4		Technical	There was an agreement on not to prejudge on the impact of terrain or any technique that was not studied.	Delete text
DSA/31	6.15.3	3	Technical	Add clarification on the scenario	See track changes
DSA/32	6.16.1		Technical	Clarify of the study considers AP only,	
DSA/33	6.16.2		Technical	Statistics are mixed at the end, it is not possible to stipulate that it allows to asses "Each AP".	Delete text
DSA/34	6.16.5		General	It was agreed no regulatory text to be included	Delete text
DSA/35	6.17.5		Technical	It is not clear how both approaches have led to the same results. The CDF presented in the study was an assessment of the estimator itself over very few realisations leading to a variance around the estimated % of interfered morphologies	

DSA/36	6.20	All	Technical + Editorial	Study was updated	Take into account track changes
DSA/37	6.21	All	Technical + Editorial	Study was updated	Take into account track changes
DSA/38	6.23.2		Editorial	Improve text	Take into account track changes
DSA/39	6.24	Figure 12	Editorial	Change the figure + text	Take into account track changes
DSA/40	6.26		Editorial	Updated to reflect updated results of the analysis based on three cities.	Various minor edits to ensure that the section reflect the results of the updated analysis presented as an update to document “26 - Analysis on MFCN BS antenna location assumptions”.
DSA/41	7	1	General + Technical	Add new paragraph	Studies were conducted in accordance with IMT deployment parameters and scenarios as defined in section **Error! Reference source not found.**. This includes full power and reduced power base stations, operating with a channel width of maximum 100 MHz. In addition to that, if considering the UE contribution to the interference, only UE with a maximum 23 dBm EIRP were considered. No studies were performed with fixed type UE operating up to 29 dBm (a.k.a FWA).

DSA/42	7	All	General + Technical	We added many track changes to add new information or improve the text	Consider the modifications to the conclusion
DSA/43	7.6		Editorial	Updated to reflect updated results of the analysis based on three cities.	From: “In addition to the coexistence studies, an analysis of actual base stations in the 3400-3800 MHz band in Paris (see Section 7.27) was performed.” To: “In addition to the coexistence studies, an analysis of actual base stations in the 3400-3800 MHz band in Paris, Marseille and Lyon (see Section 6.26) was performed.”
DSA/44	Annex 2	All	Technical	Consider our comments, it is not clear if ACLR is derived for 1-H or 1-O BS type	Consider our comments, it is not clear if ACLR is derived for 1-H or 1-O BS type