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| SEAMCAT Technical Group (STG)Send to : seamcat@eco.cept.org  |  |
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| Date issued:  | 25/06/2019 |
| Source: | Orange (yannick.li@orange.com) |
| Subject: | Discussion on single sector case in SEAMCAT |

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| **Type of report** (Bug, Enhancement or New Feature) |
| Enhancement |
| **Issue ID** |
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| **SEAMCAT version V.5.3.0** |
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| **SEAMCAT component** **involved** |
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| **Background information, reference documents and related tickets** |
| STG#64 decided to invite stakeholders to discuss about the issues related to the definition and implementation of a single sector in cellular systems: how SEAMCAT currently deals with single sectors;  what the users would like to have implemented for different options involving the selection of a single sector. |
| **Description of the issue & discussion** |
| 1. **The need**

Several use cases have been expressed during STG#64:Case\_1: Interference from a single BS to Radar**BS**Case\_2: Cross-Border CoordinationThe trigger value at the cross-border line and 6 km away from the cross-border line was defined in different ECC Rec, such as ECC Rec(15)01, (11)04, (11)05, etc., the trigger value is calculated from a single BS.**BS**BorderlineX km from BorderlineCase\_3: Hotsplot deployment caseSingle site hotspot deployment is an often happen scenario, for example, 26 GHz 5G NR, many individual mono-sector site (BS) can often be deployed.So, there is a real need of “a single sector” functionality in SEAMCAT.1. **Actual situation in SEAMCAT V5.3.0**
2. **Single sector**

This is a omni-ditectionnal single sector, even omni-directional radio site is no more used in cellular network since 2G GSM, all of the radio sites are tri-sector sites. In ECC-PT1 meeting of june 2019, Swedish railway said there are still some omni-directionnal GSM-R sites in Sweden.1. **Tri-sector & single cell**

In this case, all of the three sectors of the tri-sector site cell are active.1. **Tri-sector & single cell & single sector**

It was checked during STG meeting #64 that when a single sector is selected, the selected sector is colorized, but all of the three sectors are active, same as the case 2 of Tri-sector & Single cell.1. **Possible way forward**

Two possible ways go forward:Option 1: Add a tri-sector site sector option to the “**Single sector**” case (case 1), the users can choose a “omni-directional” sector or “directional sector”, user should be able to set the direction (azimuth) of this directional sector. Option 2: When “**Tri-sector & single cell & single sector”** is chosen, only the chosen sector is active, not all of the three sectors active as it does today in SEAMCAT V5.3.0.  |
| **Proposal** |
| Option 2 is proposed for implementation, but only for the case of single cell. When “**2-Riers**” or”**1-tier**” is chosen, all of the sectors must be active.  |
| **Suggested Priority (High, Medium or Low)** |
| Medium |