

Cellular Network Planning and Optimization: Exercise

Topic: In-building solutions for cellular systems

Reference material:

Attached documents (5) and links

http://telephonyonline.com/wireless/technology/pico_femto_cells_121506/
http://www.ericsson.com/solutions/products/hp/Femto_Cell_Solution_pos.shtml

Find more from web.

Write a report on in-building solutions. Advise for writing are given in the end of this document. Consider at least the following issues

- Describe repeater, distributed antenna system, pico base station, femto base station and home base station.
- What criteria can be used when in-building solution is selected for some indoor premises?
- Describe the network planning aspects related to different in-building solutions.
- What are the main application environments for different solutions?
- What are the main benefits that are achieved by different in-building solutions?
- What are the main drawbacks related to different in-building solutions?

Advise for writing of the report

On the goal of the report

- Report should summarize the topic based on the given material b) other material from public sources.
- Do not copy-paste any text. You may capture some important illustrative figures but remember to mention the source.
- Try to find most important results/findings/messages from the reference material.
- Reflect the topic against network planning. What are the most important characters of the topic from network planning perspective? Go through both good sides and bad sides.
- Discuss your findings in the body text and then collect them into the conclusions section in the end of the report.

Format of the exercise report:

First page:

- Title, authors, date, abstract (50-150 words, font size 10-11)

Sections(startfrompage2):

1. Introduction
 - Shorttextconcerningtobackground
 - Introduceproblem
2. Elementsofthesolution,analysis
 - Descriptionofthemainelements
3. Conclusions
 - Mainconclusionsfromtheinvestigation

Listreferencesintheendofthedocument.Usenum
referencesduringthediscussion.Example:

beringsothatyoucanrefertoyour

[1]Ericsson,‘Wirelessnetworksforin-buildingen

vironments’,whitepaper,2005.

Usefontsize12inmaintext(Sections1-3)andma
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