I'm using LimeSDR based osmo-bts-trx. And I want to support GSM-R frequency band by them. I have read the description documents, but not found the GSM-R band config in osmo-bts-trx. So I have two questions about this:

1. Does osmo-bts-trx support GSM-R frequency band?
2. If osmo-bts-trx support GSM-R frequency, what should I do to set band config?

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1. Does osmo-bts-trx support GSM-R frequency band?

If you check the actual band/frequency mapping [1], you will see that it uses the same frequencies as E-GSM. Thus no ‘special’ band configuration is required.


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2. Just to be clear here: Even if you get the SDR to transmit on a GSM-R ARFCN, this by far doesn’t make the Osmocom stack implement GSM-R. The different frequency is only one of the many differences between GSM and GSM-R.

One would have to add at least the following features:

- ASCI (VBS, VGCS) including the NCH on Um, and related signaling on Abis and A
- CSD on the control plane as well as the user plane (Um, Abis/RTP, MGCP, MGW, …)

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3. fixeria wrote:

If you check the actual band/frequency mapping [1], you will see that it uses the same frequencies as E-GSM.

This is not correct. GSM-R uses frequencies below E-GSM. This is why GSM-R handsets have special band filters that are different than normal band filters.

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4. This is not correct. GSM-R uses frequencies below E-GSM...

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5. Oh, you're right. Sorry for confusion. The Ful(x) formula is the same, but ARFCN ranges are different...
laforge wrote:

fixeria wrote:

If you check the actual band/frequency mapping [1], you will see that it uses the same frequencies as E-GSM.

This is not correct. GSM-R uses frequencies below E-GSM. This is why GSM-R handsets have special band filters that are different than normal band filters.

Thank you very much.