Report RF interference levels as part of RF RESOURCE INDICATION

This means that the BSC does not have any information about the interference level within each (unused) timeslot of the given BTS. Such interference is typically created by surrounding cells at some distance, which use the same frequency (frequency reuse) as the current cell.

OpenBSC currently doesn't use this information, but in an actual macro network deployment with high cell and frequency reuse density, the channel allocator in the BSC should prioritize assignment of new channels to those with the least interference.

AFAIU, OsmoTRX actually does the noise measurements on UL:

https://git.osmocom.org/osmo-trx/tree/Transceiver52M/Transceiver.cpp#n929

but, as one can see, noise level is not being forwarded towards the BTS...

ARelated to Cellular Network Infrastructure - Feature #4006: TRX protocol: wind...
let's implement tests within the scope of this issue, allows us to resolve #3750

From what I can see in Wireshark, my implementation seems to work:

https://gerrit.osmocom.org/c/osmo-bts/+/24612 Report interference levels in RSL RF RESource INDication [NEW]
https://gerrit.osmocom.org/c/osmo-bts/+/24613 osmo-bts-trx: report interference levels to the upper layers [NEW]

I also implemented a TTCN-3 test case:

https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+24567 BTS: add a test case for RF RESource INDication [WIP]

However, I somehow need to make fake_trx.py send NOPE indications with a certain RSSI values. Currently this is not supported: we don't have NOPE indications in our virtual Um environment at all. I'll investigate the easiest way to implement this.

As I expected, periodic RF RESource INDications do break some test cases in ttcn3-bts-test. Here is a fix:

https://gerrit.osmocom.org/c/osmo-ttcn3-hacks/+24623 BTS: ignore other RSL messages in function f_TC_paging() [NEW]

All changes are in Gerrit waiting for review:

https://gerrit.osmocom.org/q/topic:%22noise%22+(status:open%20OR%20status:merged)