

Asia, each owning 10 or 15 MHz of spectrum (uplink and downlink access). The immediate fiscal imperative is to deploy a network and access technology which can provide a return on the spectral 'investment'.

The present mainstream options are either CDMA2000 or W-CDMA – differences between the two technology options include the chip rate (and multiples thereof), the clock rate (and multiples thereof), the frame structure, the pilot channel (or pilot symbol) deployment, cell to cell synchronisation and network architectures (GSM-MAP and/or ANSI 41).

W-CDMA is presented as a logical choice for existing GSM network operators partly because of the compatibility between the multi-frame and super-frame structure, partly because of the integration of the GSM beacon channel and W-CDMA pilot symbols, partly because of the clock rate and chip rate multiples and partly because of the evolution route from existing GSM MAP network architectures (and associated legacy network investment).

GSM/W-CDMA FRAME STRUCTURE COMMONALITY

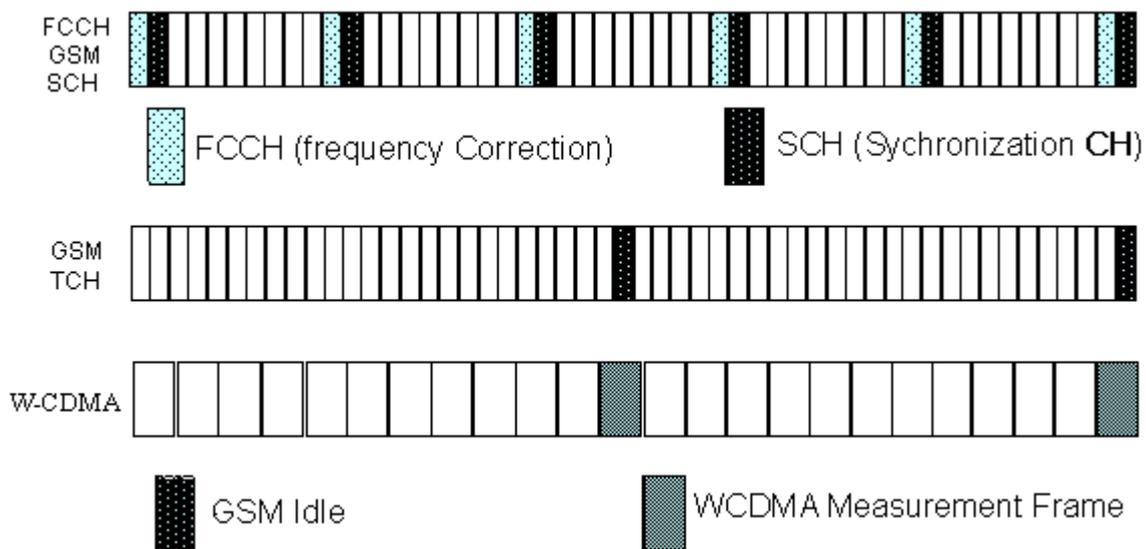


FIG 2

Note also that the IMT2000 bandwidth, although allocated in 5 MHz bandwidths, retains a 200 kHz channel spacing raster providing sub-sampling commonality across GSM and W-CDMA.

In practice, it would not be impossible (or even particularly difficult) to make CDMA2000 compatible with existing GSM networks but for the time being, W-CDMA is presented as a better option for European and Asian operators, particularly operators who already own a GSM network or who derive significant revenues from GSM roaming arrangements.

RTT Technology Topics reflect areas of research that we are presently working on.

We aim to introduce new terminology and new ideas to clarify present and future technology and business issues.

Do pass these Technology Topics on to your colleagues, encourage them to join our [Push List](#) and respond with comments.

Contact RTT

[RTT](#), the [Shosteck Group](#) and [The Mobile World](#) are presently working on a number of research and forecasting projects in the cellular, two way radio, satellite and broadcasting industry.

If you would like more information on this work then please contact

geoff@rttonline.com

00 44 208 744 3163