VARIABLE SPEED COMPRESSION

- Utilizes slow compression changes within an environment for transparent and natural sound
- Provides immediate adjustment in new environments - preserving audibility and preventing sudden gain increases

- Utilizes slight syllabic compression for optimizing the individual dynamic range
- Environment dependent compression ratio and adjustment speed will ensure optimal audibility while preserving sound quality

**EDRC compressor**
Slow adjusting compression for all input levels

**FAST compressor**
Handling fine structure dynamics

**JUMP system**
Ensure instant adjustment to large environment changes

GOAL

Further improve Widex legacy sound quality – in more situations and for more hearing losses

Ensure true slow compression for optimal sound quality for all listeners

Enable fast compression – for those that benefit from it and in situations where it helps
SLOW EDRC AND FAST COMPRESSION COMBINED

- The main compressor ensures that the overall gain in each channel follows the Widex Fitting Rationale using Enhanced Dynamic Range Compression
- In the figure below, the grey line shows the changing level in an environment over time. When the overall level (blue line) changes, the compressor gain will slowly follow to reach the new working point (A).
- The Fast Compressor handles the dynamics of the fine structure (the red line), in the signal around this working point (A).
- The amount of fast compression depends on the hearing loss as well as on the immediate environment.

HANDLING FAST CHANGES – THE JUMP FUNCTIONALITY

- The *Jump* system ensures very fast adjustment to quick environmental changes
- The expected level variation/modulation is continuously analyzed. An example of this is shown as the green area in the figures below.
- When the level changes abruptly, as from level A to level B, it is suddenly out of the current expected modulation range
- This leads to a very fast shift in gain setting from A to B. The result is an experienced stable sound delivery even with large level changes.