

## **Abstract EFAS/DGA 2007**

### **Speech perception in children using hi-resolution 120: preliminary report**

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HiRes120 uses a new current steering approach to deliver electrical stimulation to sites between the physical electrode contacts. Simultaneous delivery of current from adjacent electrode contacts targets neural populations smaller than the physical electrode pitch. A group of 6 children were fitted with HiRes120 at their first fitting session. Fitting was conducted with the SoundWave fitting software and used the same psychophysical levels generated for the HiRes strategy, small adjustments being made following presentation of live speech. The children were managed in the normal clinical routine with an evaluation made after two months of implant use forming the results presented here. A comparison was made to a group of 6 children fitted with the HiRes strategy and subsequently switched over in Hires 120.

#### **Method:**

Speech perception was assessed on the ground of Erber's categories. Tests included: detection, discrimination and identification performed live voce and with Auditory Speech Sounds Evaluation test (A\$E®).

#### **Results:**

Subject switched on in Hires 120 showed 100% detection for all phonemes tests and for common environmental sounds. All subjects switched over in Hires 120 showed improvement in discrimination of phonemes. Two subjects showed also improvement in identification task. HiRes 120 children learn much more from surrounding context (incidental learning). Some insight into the emergence of naturalness of speech production and access to music will also be reported.

Initial observations of HiRes120 appear promising although longer term results are required to be able to make a more reliable assessment.

