

Welcome to HANSATON. Jens Heese

"Actual Hearing System Technologies – Technical innovations on smallest space"





Agenda.

- 1. Objective of this presentation
- 2. Company overview Hansaton Akustik GmbH
- 3. Classification of Hearing Systems
- 4. Technical information
- 5. Further development and future trend



- 1. Target of this presentation.
- What is Hansaton?
- Short description of hearing systems
- A technology overview and the state of the art



2. Company overview Hansaton Akustik GmbH.

- founded in Hamburg 1957
- a family lead company
- product and software development in Hamburg
- production in Germany/Europe and the far East
- represented in more than 70 countries
- worldwide 190 employees



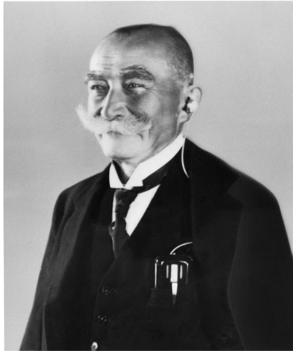
- 3. Classification of Hearing Systems.
- 3.1. Pocket Hearing System
- 3.2. BTE (Behind the Ear Hearing System)
- 3.3. ITE (In the Ear Hearing System)
- 3.4. Cochlear Implants
- 3.5. Bone connection



3.1. Classification of Hearing Systems. Pocket Hearing System.

How it all started... (not produced by Hansaton anymore)







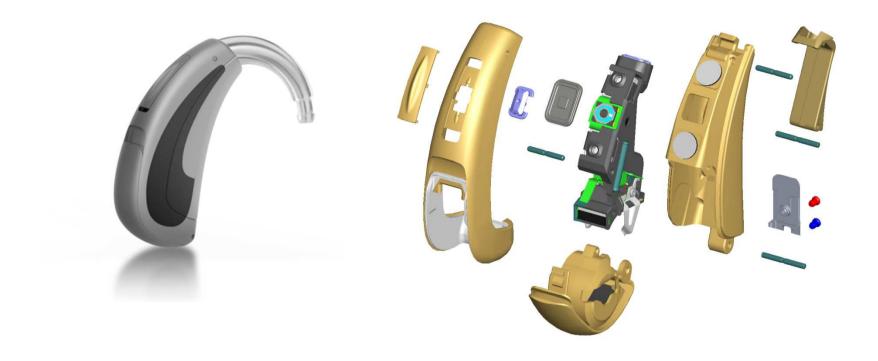


3.2. Classification of Hearing Systems. BTE (Behind the Ear Hearing System).





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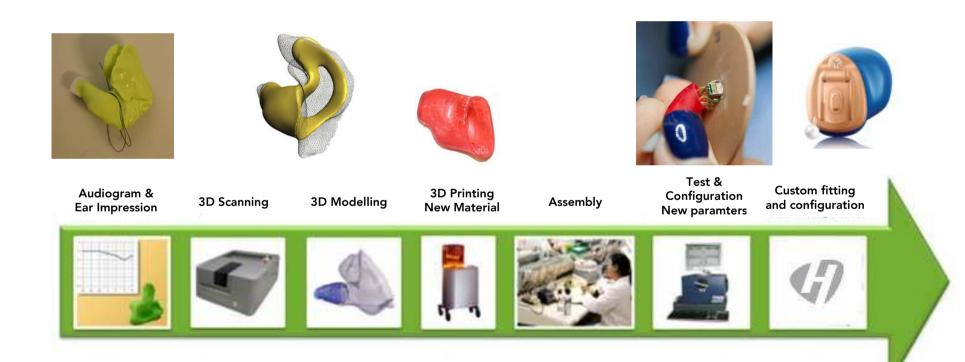
3.3. Classification of Hearing Systems. ITE (In the Ear Hearing System).





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manufacturing steps, custom ITE







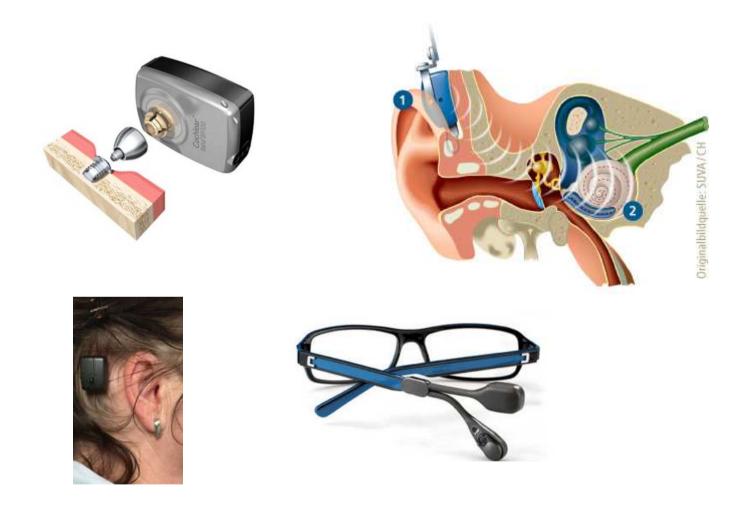
3.4. Classification of Hearing Systems. Cochlear Implants (not produced by Hansaton).



Quelle: Cochlea Implant Systems



3.5. Classification of Hearing Systems. Bone conduction (not produced by Hansaton).





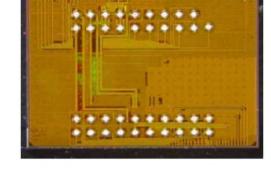
4. Classification Technical Information BTE/ITE Electronic Packaging.

- folded flexboard PCB
- safe against EMI
- 1st dual-core DSP architecture
 with integrated analog front-end
- Processor > 31 millions Transistors
- calculation speed 440 million steps per sec
- Technology: 65nm
- CPU clock (nominal): 5.68 MHz





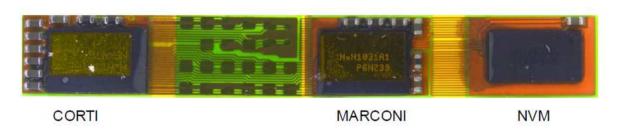


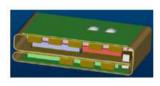




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-DSP



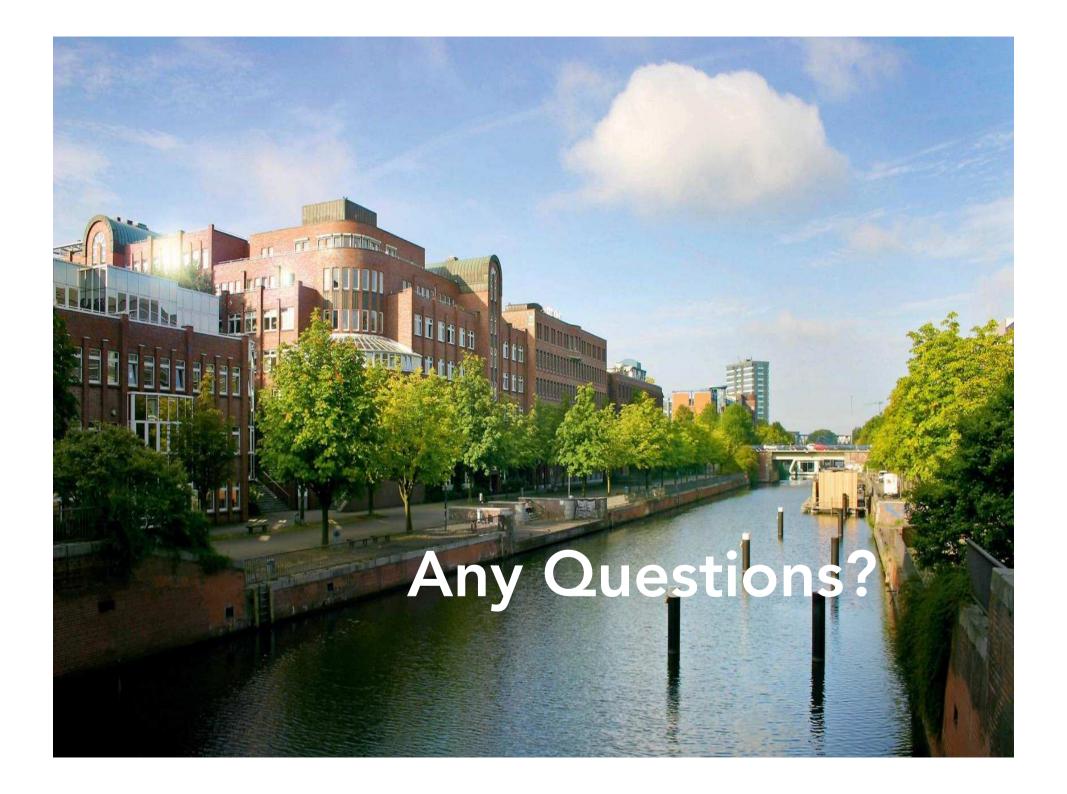






5. Further development and future trend.

- new Software for calculating and solving acoustic problems
- new connectivity solutions
 - bluetooth for Hearing Systems
 - Apps for Smartphones
- new wireless Charging Systems
 - Fuel cell, Lilon, etc.



Welcome to HANSATON.

"The actual Hearing System Chip has round about > 31 millions transistors, which is the same calculation power as the Apollo 11 mission to the moon!"



