

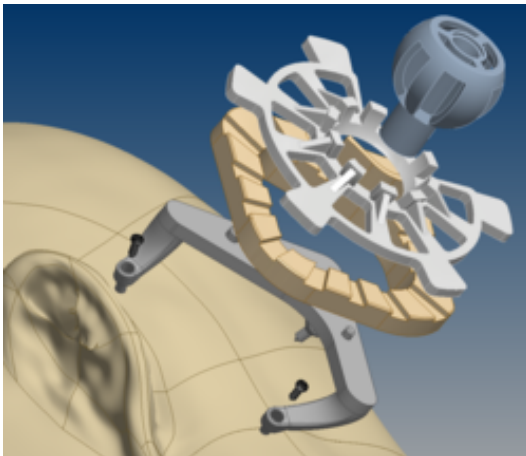
## Technology Offer

# Pre-sterilized modular surgical guidance device

Reference Number 15-00384

### Challenge

Computer-aided surgery contributes enormously to the safety of patients and therefore gains importance in almost all fields of surgical interventions. In particular neurosurgery, cochlea surgery or deep brain stimulation require accurate surgical guidance tools for patient-specific interventions. At present, individualized guiding devices are mechanically finalized in a non-sterile area and, therefore, have to be sterilized before they can be used for the surgical intervention. Thus, there is an unmet need for easy and sterile manufacturing of individualized guiding tools.



*Schematic drawing of the surgical guidance device.*

### Technology

The recently developed modular device comprises a standardized set of prefabricated sterile parts for fast and easy assembly of a patient specific guidance tool. It enables computer-aided surgery without time-consuming interruptions caused by sterilization after the intraoperatively performed, patient-specific adjustment. As a further advantage, all components can be provided as disposable which supersedes inconvenient sterilization of device parts. Compared to guiding systems based on rapid prototyping, the present technology ensures a better acceptance among the surgical staff since complicate equipment is not necessary. Finally, the device is suitable for automatic or manual patient-specific adjustment of the guiding parts. Therefore, the inherent surgical risk for the patient decreases substantially and duration of the surgical intervention is considerably reduced.

### Commercial Opportunity

In-licensing or collaboration for further development is possible.

### Development Status

First prototype has been developed and initial proof-of-concept studies have been performed.

### Patent Situation

US (US 10,441,377 B1) and European patent granted with priority from 2015. European (3 058 890) patent validated in DE, FR, GB, CH, NL .

### Further Reading

Rau Th. S., Lexow G. J., Kluge M., Lenarz Th., Majdani O. (2016): An alternative concept for template-guided minimally-invasive cochlear implantation surgery. In: Ansó J. et. al (Hrsg.): Tagungsband der 15. Jahrestagung der Dt. Gesell. für Computer- und Roboterassistierte Chirurgie e.V. (CURAC), 29.09.-01.10.2016, Bern. Seiten 149-154.