

Entrepreneurial ID «venture leaders» 2010



Name: Matthias Peterhans

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Project/ Company name: University of Bern

Short description: CAScination builds a navigation system for liver surgery

Web site: www.cascination.ch

Industry: Medical Technology

The Start-up

Status : CAScination GmbH created in Aug. 2009; Business plan available; Two working prototypes in clinical use; 12 surgeries performed on human patients; One navigation system sold; CE medical device certification	Company / team size: 3 persons in the core team + 3 researchers an University of Bern
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Product / service: CAScination sells a navigation system for surgeons. Similarly to the navigation system in a car, our surgical navigation system provides a map (of the patient) and guides the user to a desired target location (tumor to be removed). This information is displayed in an augmented reality scene and allows for highly precise treatment of liver tumors. The system is sold together with service contract and consumables required for each intervention.

Target customers: Leading European hospitals and private clinics providing advanced surgical treatments.

Financing: Funding of initial business activities by the sales of research system to early adopters of surgical navigation technology. Loans required for mid- and small hospital market entry and for obtaining FDA approval (US market).

Growth objectives: Within 5 years, CAScination aims to be the leading manufacturer for liver navigation systems, be active worldwide, have 20 employees and be preparing extensions to other surgical domains.

US objectives: Speed up our company's growth; Review the financing strategy; Understand the concurrent (Pathfinder Inc, US company)

Description:



- The use of our navigation system in liver surgery enables potentially curative treatment for patients which cannot be healed with the current state of the art surgery.
- The display of 3D information with the surgical context increases anatomical orientation and therefore reduces risks and complications during surgery
- Our navigation solutions provides optimal interfaces to existing OR interfaces and an intuitive workflow with minimal time overhead

The surgical navigation system by CAScination is a platform which can be extended to various surgical applications (lung, kidney, prostate) and which can be combined with existing surgical devices. Partnerships with MeVis Medial Solutions AG and Microsulis Inc are established and have led to an integrated solution ranging from surgical planning to treatment execution by microwave ablation. Further partnerships with medical device manufacturers are in preparation.

The venture leader (and his team)

Matthias Peterhans has a master in Electrical Engineering, a MAS in medical physics and is currently finishing his PhD in Biomedical Engineering at University of Bern. He is one of the main developers of the liver navigation system and is leading the research group working on system improvements and clinical testing. Besides his technical expertise in the field of surgical navigation technology and image processing he provides medical industry knowledge from a previous employment with Toshiba Medical Systems and from several projects with partners from the medical device industry.

Being a communicative and interdisciplinary-thinking person with a solid technical and medical background, organization skills and the motivation to enter the business arena, he aims to lead CAScination towards success with an innovative product which responds to the needs of the market.

Further team members are Stefan Weber (professor at University of Bern, regulatory affairs expert, several MedTech startups) and Sylvain Anderegg (head of software development, experience in medical software startups). The company is supported by a scientific advisory board with clinical and industrial expertise.