Description	
Job Title	Systems Engineering Developer
Reports to Title	Director Hardware Engineering & QA
General Accountability	Our mission is to Profoundly change the standard of care by creating a tomorrow where clinicians can confidently ablate tissue with precision; a tomorrow where patients have access to safe and effective treatment options, so they can quickly return to their daily lives. Changing the standard of care is part of our fabric. We are a group of energetic, problem-solvers focused on innovation, and looking to change the world. If you want to make a Profound impact with your career, while making a difference in other people's lives, here is your chance. The Systems Engineering Developer is responsible for assisting with the design and test of all MRI-related aspects of the Company's medical device, including hardware/software development, imaging sequence optimization, device function and system MR-compatibility. In addition, the role will support clinical activities and the associated regulatory submissions. Testing is done offsite, at MRI facilities in the GTA and internationally, with design, data analysis, and reporting conducted at the Company main office. It is anticipated that the majority of time will be spent in the GTA.
Duties and Responsibilities	1. Participate in the generation of system requirements and specifications 2. Assist with developing, testing, and optimizing MRI sequences for various MRI models 3. Co-ordinates system-level activities as part of design development and testing of the Company's products 4. Design of hardware, software and methods to support integration of the device with various MRI models 5. Perform verification MRI testing and writing verification reports 6. Characterize equipment magnetic safety 7. Run regular phantom testing with new revisions of equipment/software at MRI site(s) 8. Characterize equipment's MR compatibility and effect on MRI data (and vice-versa) 9. Investigate new designs in MRI 10. Create, update and execute test procedures 11. Participate in risk management and usability engineering activities 12. Report defects in defect tracking system and verify fixes for defects 13. Required to support Company in planning, development and execution of clinical trials 14. Develop and implement data analytics to assess the technical performance of the clinical trial.

	15. Investigate product complaints, perform root cause analysis of failures, and propose remediation in a timely fashion.
	16. Develop MATLAB analysis scripts to improve treatment pipeline and to analyze treatment outcomes.
	17. May develop computer simulations to investigate changes to the treatment parameters for product development and regulatory submissions. Present results in the context of the wider scientific field.
	18. May be called upon to assist in the regulatory submissions of products for Health Canada, FDA, CE, etc. Participate in regulatory strategy discussions. Liaise with physicians on future clinical investigations initiated by the company and external parties.

Competencies

Education	University degree in Engineering or Science
Certifications	None
Key Attributes (experience, skills and technical knowledge)	**Required:** ▪ 3 years MRI experience ▪ Previous experience working as a Systems Engineer ▪ MRI physics understanding ▪ MS Office (Word, Excel, PowerPoint), MatLab ▪ Working knowledge of general information technology: Windows OS, IP networking, basic security, etc. ▪ Excellent problem solving and troubleshooting skills ▪ Data analysis using standard tools (i.e. Excel, Matlab) ▪ Basic experience with image processing ▪ Ability to thoroughly document and summarize all aspects of testing efforts ▪ Proven ability to write and execute test plans ▪ Detail-oriented ▪ JIRA Atlassian or similar issue tracking system ▪ Interest in applications of engineering in medicine ▪ Able to work well in teams and independently ▪ Excellent verbal and written communication skills ▪ Valid Ontario driver's license (specifically for traveling to MRI facilities within the great lakes region). ▪ Valid passport for travel to United States and Europe **Desirable:** ▪ MRI console operation ▪ Device-compatibility testing with MRI ▪ MR-sequence development