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The project, focusing on the design of a robotic platform for the inspection of unpiggable transmission pipelines and integration of an inspection sensor on it, is progressing well, despite an anticipated multi-month delay in the design effort. The delay is due to the selection of a sensor concept fundamentally different from that assumed in the proposal preparation phase. The new sensor concept will dramatically improve the performance of the system, but requires substantial changes in the platform, thus the delay.

Electronic components have been successfully pressure tested, with knowledge gained as to which components need to be pressure-housed and which do not require additional protection.

The system design has proceeded to the stage that the following modules are nearing design completion: drive-module (deploy and traction), steering-module (pitch and roll), battery-module (power-system), and the camera-module (Imaging, computing and wireless communications). A new module recently decided to be required for handling obstacles with the new sensor-module design, the sensor-articulation module, will be designed in the next reporting period.

A simulation of the (now stable) system design was developed to allow for verification of the obstacle-passage (plug-valve) and obstacle navigation (elbows, bends), including back-to-back and out-of-plane bends.

An automated planner prototype was developed to allow the GUI to integrate assistance to the operator to dynamically and interactively plan and re-shape the robot configuration to assist in obstacle passage (primarily bends, Ts and mitered elbows).

Automatika will continue to interact with the Sensor Provider, focus shifting now from sensor design selection to the control interface between platform and sensor. Finally, launching/retrieval related design issues were considered, this effort continuing into the next reporting period through meetings with relevant vendors.

Discussions with potential commercializers continue, with one of them nearing a decision on whether to proceed with formal licensing negotiations.