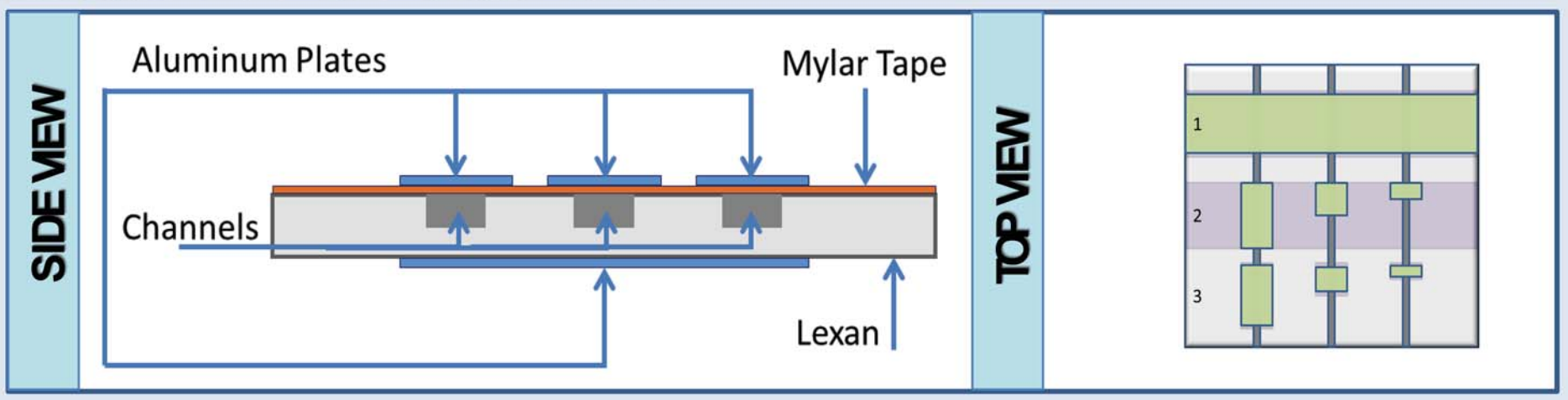
ANALOGIC®

SCOPE
Senior Capstone Program in Engineering

Analogic partnered with the Olin College SCOPE program for the opportunity to work with innovative students on leading edge research and development for biomedical devices. The students worked with Analogic's engineers to explore improving the effectiveness and reducing the cost of optical subsystems and microfluidics processes for various applications. The first semester focused on a feasibility study of optical subsystems; the specific process investigated was found to be unfeasible. The second semester focused on detecting fluid in channels and resulted in a working prototype. Work from the second semester is discussed below.

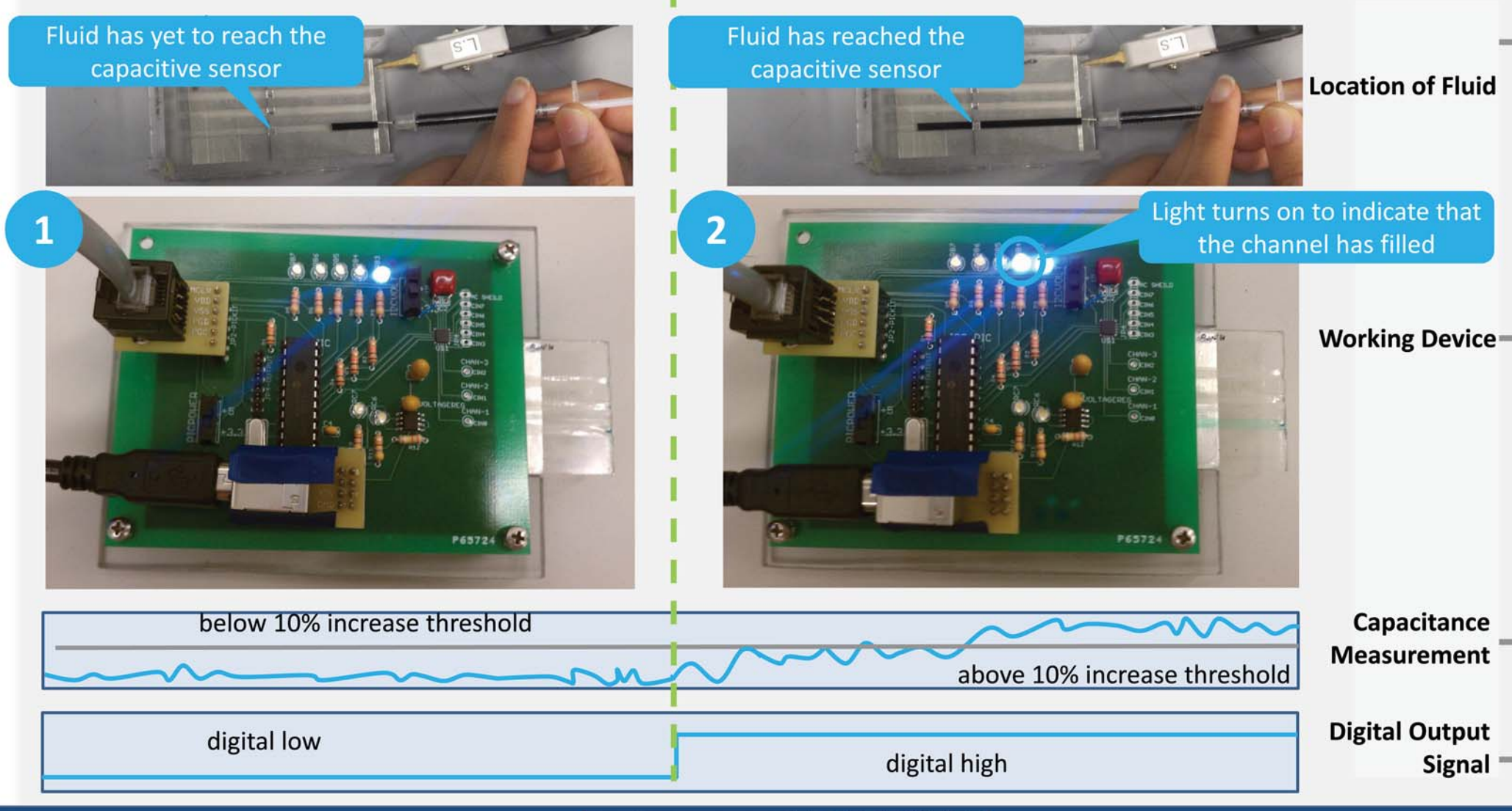
The Goal: The detection of fluid passing through small channels.

PHYSICAL EXPERIMENTS



In order to account for several applications, it was necessary to perform physical testing to determine the feasibility and extent to which capacitance-based detection could be successfully implemented. We designed several capacitor configurations to test the importance of variables such as channel width, capacitor plate length, and sample thickness, among others.

THE FINAL PRODUCT



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