The Johns Hopkins University Applied Physics Laboratory (APL) Global Health Surveillance program focuses on all phases of the surveillance timeline—from prediction of a potential disease outbreak through response and communication efforts. SAGES (Suite for Automated Global Electronic bioSurveillance), which builds on years of experience with the ESSENCE system, is the cornerstone of APL’s work in global health diplomacy initiatives. This issue of the Johns Hopkins APL Technical Digest describes the development, implementation, and adaptation of the SAGES suite of tools; the process and challenges of making the tools open source; and potential new analytic models for early detection of disease outbreak.