Fireline Science Awarded Grant from the National Science Foundation for an Edge-based Learning Management System

Small Business Innovation Research Program Provides Seed Funding for R&D to Close the Digital Divide for K12 Students

TEMPE, ARIZONA, USA, June 14, 2021 /EINPresswire.com/ -- Fireline Science LLC has been awarded a competitive National Science Foundation (NSF) Small Business Innovation Research (SBIR) grant to conduct research and development (R&D) to create a new technical framework for an intelligent, edge-based learning management system (LMS) that will work in completely offline or suboptimal online student environments.

The COVID-19 crisis resulted in all American schools moving to online and hybrid learning models. Even with in-person learning now resuming, many of these schools are continuing to use digital learning at home given the potential to provide enhanced learning opportunities as well as learning continuity when students can't be physically present. Unfortunately, many students are unable to participate in digital learning at home. Rural K12 schools like those on American Tribal lands have student populations where the majority of households lack high-speed Internet access . Additionally, many family circumstances may result in the lack of Internet access at home even if the infrastructure is available. This "digital divide" has been a long simmering public policy issue which COVID-19 dramatically brought to the fore given rural schools like these had no ubiquitous solution for digital learning at home.

This NSF grant will support Fireline Science as it develops a fundamentally new engineering approach to learning management systems that relies on independent, intelligent agents at the edge, a cloud-based management system for synchronous or asynchronous communications, as well as new web capabilities enabled by innovations in Chromium's Project Fugu. Practically, this will provide a near-term solution to digital learning at home as high-speed Internet infrastructure is expanded to rural areas. It will also provide a solution for many students whose home situations don't allow for access to the Internet independent of access availability.

"NSF is proud to support the technology of the future by thinking beyond incremental developments and funding the most creative, impactful ideas across all markets and areas of science and engineering," said Andrea Belz, Division Director of the Division of Industrial Innovation and Partnerships at NSF. "With the support of our research funds, any deep technology startup or small business can guide basic science into meaningful solutions that

address tremendous needs."

"We began this project based on my father's experience as a principal of a Native American K-6 boarding school. When the COVID-19 crisis began, he had no viable digital learning solutions for his students and had to rely on bus drivers delivering paper packets to provide continuity of learning," said Collin Sellman, PhD, CEO at Fireline Science LLC. "We are confident that our deep experience in data science, AI, and building next-generation, large-scale learning management systems will allow us to develop a fundamentally new approach for offline student learning to help the students currently being left behind."

About the National Science Foundation's Small Business Programs: America's Seed Fund powered by NSF awards $200 million annually to startups and small businesses, transforming scientific discovery into products and services with commercial and societal impact. Startups working across almost all areas of science and technology can receive up to $2 million to support research and development (R&D), helping de-risk technology for commercial success. America's Seed Fund is congressionally mandated through the Small Business Innovation Research (SBIR) program. The NSF is an independent federal agency with a budget of about $8.5 billion that supports fundamental research and education across all fields of science and engineering.

About Fireline Science LLC: Fireline Science is an Arizona-based small business focused on educational technology products and using AI and data science to drive innovation. The Fireline Science team brings decades of experience from international telecommunications firms, large multinational education technology companies, and cyber security startups. Proudly supported by Amazon Web Services EdStart program. Press contacts at press@firelinescience.com.

Collin Sellman
Fireline Science LLC
press@firelinescience.com

This press release can be viewed online at: https://www.einpresswire.com/article/543790003