Abstract:
Sonics was founded in 1996, just as the term "System on a Chip" began to enter the common semiconductor vernacular. The author identified the wide variety of heterogeneous components that would need to cooperate to satisfy embedded consumer and communications applications as a key challenge in completing SoC designs. Networking and telecommunications technologies seemed to offer the required abstraction, decoupling, and hard real-time performance guarantees that conventional computing approaches lacked. By early 1997, Sonics had become a licensor of active interconnect technology focused on SoC applications.

While much has changed over the past 10 years, the fundamental principles behind Sonics' approach have not. This talk will examine the changes the author has seen in SoC's, and how well those changes matched the predictions embodied in Sonics' products. The talk also explores key challenges in current embedded system design, and makes predictions about how such designs are likely to evolve.

Bio:
Drew Wingard is a founder and the Chief Technical Officer of Sonics, Inc., which has been providing SMART interconnects since its founding in 1996. He has been the original architect of Sonics' products and the original creator of the Open Core Protocol interface specification. He currently represents Sonics on the Governing Steering Committee of OCP-IP, where he chairs the Specification working group.

Prior to founding Sonics, Wingard led the development of advanced circuit and CAD methodology for MicroUnity Systems Engineering, Inc. Previously he had co-founded Pomegranate Technology, where he designed an advanced SIMD multimedia processor. He received a B.S. from the University of Texas, Austin and an M.S. and Ph.D. from Stanford University, all in electrical engineering.