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G.FASTER: 100 Megabits More for Every British Home

ASSIA's DSM Data Sharing Can Raise the Speed of a G.fast Connection by 100Mbps

REDWOOD CITY, Calif. — May 16, 2016 **—** ASSIA, Inc., a market-leading SaaS company helping to make the Internet reliably fast for global Internet service providers (ISP's), today announced that Dr. John Cioffi, ASSIA's CEO and Chairman, will be delivering the keynote address at the G.fast Summit conference on May 19, 2016: "FULLY Unbundled Vectored DSLs: It is Absolutely Possible!" where he will introduce a revolutionary approach to multi-ISP (Internet service provider) management of high-performance DSL broadband networks: "DSM Data Sharing."

"The ten million lines BT is cost-effectively upgrading to G.fast can run even faster if all ISPs cooperate for maximum performance. The 330Mbps G.fast trials BT is running could deliver over 400Mbps even in their unbundled network," said Dr. John Cioffi, ASSIA CEO and DSL pioneer. He added, "An extra 100 megabits for millions of homes should be a powerful incentive for the ISPs and OFCOM to find a path forward. Everyone will win except the cable competitor."

Unbundled networks – where an incumbent ISP leases portions of its broadband distribution network among competitive operators – have been believed to be unable to support mixtures of higher performance technologies that employ vectoring because of the practical limitations of multiple-operator DSLAMs. At the G.fast Summit Cioffi will present an immediately-deployable solution that would employ a single DSLAM per cable binder – thereby enabling the performance benefits of any combination of vectoring – using "DSM Data Sharing" for multiple operators to independently manage and support delivery of their broadband service products.

As an inventor of DSL vectoring – required for the new high speeds – Dr. Cioffi explained, "Fiber-like speeds of 100 megabits up to a gigabit are practical, if and only if all copper lines in the same bundle are managed together to reduce crosstalk interference. Billions of calculations are required every few seconds to identify and cancel noise in the shared cable binder."

He added, "We wanted to find a way to protect competition while also yielding maximum performance. Competition has delivered to Britain some of the best broadband in Europe at a price that is far below Canada and the United States. This can be accomplished by software unbundling which we call DSM Data Sharing."

"Each operator would have independent software systems allowing each to manage and support their customers' quality of experience, enabling all to offer differentiated service products. For example, some might supply gateways with better Wi-Fi. Others might design their networks for reliable 4K television, with enough capacity even for championship football and the most important events. Packet sizes and transmission parameters can be adjusted for better gaming performance. All could compete to offer the best customer service. Even better, there will be innovative ideas none of us have considered yet."

DSM Data Sharing: The Key to Higher Performance Vectored (G.fast or G.vector) DSL
- Traditional G.fast sets aside the first tens of MHz of spectrum for unbundled binder coexistence with other technologies and operators.
- DSM Data Sharing enables use of the full spectrum, from 2MHz to 106MHz, thus enabling an added 100Mbps of communications performance for G.fast and G.fast/G.vector binder coexistence.

"Everything would remain the same except the last copper link to the homes with no new equipment innovation necessary, unlike other recent proposals to connect different vectored DSLAMs," said Dr. Cioffi. "All ISPs would continue to use their networks to connect to the exchanges and to the Internet, with unfettered and independent ability to support their own subscribers."

Dr. Cioffi's G.fast Summit presentation may be found here: http://www.assia-inc.com/wp-content/uploads/2016/05/FULLY-Unbundled-Vectored-DSLs.pdf

About Dr. John Cioffi
Stanford Professor Emeritus John Cioffi is Chairman and CEO of ASSIA, which makes management software for broadband and WiFi. He won the Marconi Prize ("The Nobel Prize for Communications") for his work on DSL. Cioffi is an inventor on basic patents for ADSL, VDSL, Dynamic Spectrum Management, and vectored DSLs. His 2002 paper with George Ginis, *Vectored transmission for digital subscriber line systems,* introduced the concept of vectoring for high speed DSL.

About ASSIA, Inc.
ASSIA, Inc. is a trusted partner with the leading market share of management and optimization software solutions for global broadband and residential Wi-Fi networks. ASSIA's Expresse broadband system enables Internet Service Provider companies to save significant money on subscriber care, increase customer satisfaction, and launch more revenue-generating service tiers. ASSIA's Cloudcheck Wi-Fi system enables enterprise companies to provide, and consumers to enjoy, premium digital experiences over the residential Wi-Fi network. ASSIA has more than 80 million broadband households under contract worldwide. For more information, visit www.assia-inc.com.

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"ASSIA" is an acronym for "adaptive spectrum and signal alignment."

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