



RELEASED FOR PUBLICATION

## **StreamScale Provides Notice of Ownership of Fastest Erasure Code Technology Disclosed at FAST'13**

*Technology Wrongly Identified as "Open Source."  
Technology Only Available for Use Through Properly Executed Licensing  
Agreements With StreamScale*

**Los Angeles, CA – July 23, 2013:** [StreamScale](#), a leading developer providing technology to protect storage systems from data loss and corruption, announced today it has discovered publication of alleged "open source" materials that include the Company's confidential and patent-pending technology. This StreamScale technology is not "open source" and was improperly disclosed in publications and presentations at FAST'13, the 11<sup>th</sup> annual USENIX conference on file and storage technologies.

In particular, StreamScale has learned that one of its consultants who was under a confidentiality agreement was an author of various papers including one entitled "Screaming Fast Galois Field Arithmetic Using Intel SIMD Instructions" publicly presented at FAST'13. The technology contained in these papers is protected intellectual property owned by StreamScale, and it is not "open source." StreamScale announced it will enforce its rights to this technology and parties may not use this technology in any way without a proper license from StreamScale.

"We have recently become aware that StreamScale confidential information and trade secrets were disclosed in papers delivered at FAST'13 and elsewhere without StreamScale's approval or knowledge," said Michael H. Anderson, president and CEO, StreamScale. "It is clear that the research and resultant findings were a direct result of StreamScale's proprietary IP. StreamScale's technologies are not only the subject of trade secret protection but are also subject to copyright protection and at least two pending patent applications."

StreamScale patent applications can be found at the US Patent & Trademark Office website and [the company's website](#):

- 1) ACCELERATED ERASURE CODING SYSTEM AND METHOD (U.S. Patent Application No. 20130173996)
- 2) USING PARITY DATA FOR CONCURRENT DATA AUTHENTICATION, CORRECTION, COMPRESSION, AND ENCRYPTION (U.S. Patent Application No. 20130173956)

Continued Anderson, "Do not be misled by claims that the technology is "open source" and do not assume that such information downloaded from USENIX or University websites is unprotected. We have asked these organizations to remove the content from their websites and conference proceedings. I am informing any company or person that uses this protected technology without license from StreamScale does so at their own risk."

In addition to the paper presented at FAST'13, StreamScale has identified a number of other papers which include the patent pending technology and must not be used without license from StreamScale. While it is unknown how many papers have included the information, here are several that people should understand include StreamScale's protected information:

- M. Blaum and J. S. Plank, Construction of two SD Codes, arXiv: 1305.1221, May, 2013.
- J. S. Plank and M. Blaum, "Sector-Disk (SD) Erasure Codes for Mixed Failure Modes in RAID Systems," Technical Report CS-13-708, University of Tennessee EECS Department, May, 2013.
- J. S. Plank, "Open Source Encoder and Decoder for SD Erasure Codes - Revision 2.0," Technical Report CS-13-707, University of Tennessee EECS Department, May, 2013.
- J. S. Plank, "Open Source Encoder and Decoder for SD Erasure Codes," Technical Report CS-13-704, University of Tennessee EECS Department, January, 2013.
- J. S. Plank, E. L. Miller and W. B. Houston, "GF-Complete: A Comprehensive Open Source Library for Galois Field Arithmetic, Revision 0.1," Technical Report CS-13-703, University of Tennessee EECS Department, January, 2013.

At the core of the StreamScale technology is high performance erasure coding that optimizes Galois Field (GF) arithmetic. StreamScale discovered how to utilize specific instructions in the Intel SSE3 SIMD instruction set to perform GF arithmetic so that it is only limited by the L2/L3 cache, providing up to a 12x improvement over the best performing existing XOR codes. As reflected in patent filings dating back to 2011, implementing erasure coding with StreamScale technology enables the creation of the best performing most reliable storage systems that eliminate data loss and corruption due to disk failure, service errors, silent data corruption, and unrecoverable read errors while increasing system performance.

"Unfortunately we have read comments online that individuals and companies are using these protected technologies based on these papers to optimize storage systems and other products without license from StreamScale," concluded Anderson. "We have the utmost respect for USENIX and technology companies in the industry and anticipate they will do the right thing by removing the improperly disclosed information from their websites and conference proceedings and seek a license agreement from us or remove the StreamScale IP for their solutions."

## **About StreamScale**

[StreamScale](#) leads the industry in providing technology to protect storage systems from data loss and corruption. The [Big Parity® Verified Erasure Coding® system](#) is available to all data storage manufacturers and system integrators. By including Big Parity in their storage system manufactures can achieve 10 orders of magnitude better RAID reliability and up to 30X faster system performance.

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