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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Springpath, Inc.
Petitioner

v.

SimpliVity Corporation,
Patent Owner

Case IPR2016-01780

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 8,478,799 CHALLENGING CLAIMS 1–2, 7–13, 17–20, 27, and 33–35 UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104

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3. Claim 7: "The file system of claim 1, wherein: the file object mapping comprises a linear list, a tree structure or an indirection table." 40
4. Claim 8: "The file system of claim 1, wherein: the file objects include a root object having its own object fingerprint derived from all of the objects in the file system such that every object in the file system is accessible through the root object." 41
5. Claim 9: "The file system of claim 8, wherein a change of content of any file system object changes the root object and tracking changes in the root object provides a history of file system activity." 43
6. Claim 12: "The file system of claim 1, wherein: the object size is variable. 43
7. Claim 17: The file system of claim 1, including: a stack wherein the object store comprises a lower portion of the stack and the file system comprises an upper portion of the stack. 44
8. Claim 18: The file system of claim 1, wherein: the namespace file system and the object store are implemented in one or more of digital electronic circuitry, computer hardware, firmware, a computer program in a non-transitory machine readable storage device, or combinations thereof. 44
9. Independent Claim 19 45
10. Claim 27: A computer program embodied in a non-transitory machine readable storage device comprising program code means which, when executed by a process, performs the steps of method claim 19. 47
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1. Claim 11: The file system of claim 1, wherein: the fingerprint is an cryptographic hash digest of the object content. 49

2. Claim 20: The method of claim 19, comprising: maintaining a location index for mapping object fingerprints and physical locations of the objects. .49

3. Claim 33: The method of claim 19, including: maintaining in the object store a location index of object names and physical object locations. 50

4. Claim 34: The method of claim 19, wherein: the file object mapping is indexed by an offset into the content of the file, and comprises a linear list, a tree structure, or an indirection table. 51

5. Motivation to Combine 51

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1. Claim 10: The file system of claim 1, wherein: the namespace file system is provided as a layer in a storage stack between a virtual file system layer and a block storage abstraction layer. 53

2. Motivation to Combine 54

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1. Claim 13: The system of claim 1, wherein: the file system is a POSIX standard compliant file system. 57

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Springpath, Inc. ("Springpath") respectfully requests *Inter Partes* Review of claims 1–2, 7–13, 17–20, 27, and 33–35 of U.S. Patent No. 8,478,799 (the "'799 patent") (Ex. 1101) pursuant to 35 U.S.C. §§ 311-19 and 37 C.F.R. § 42.1 *et seq*.

I. INTRODUCTION

The '799 patent claims a purportedly novel computer file system for naming and storing of files on computer storage devices. But in fact, the claimed file system merely combines well known techniques disclosed by Jinyuan Li and others nearly four years before the alleged invention. Decl. ¶ 24 (Ex. 1102).

The '799 patent is directed to a stacked file system, comprising two distinct storage systems: a namespace file system and an underlying object store (also referred to in the '799 patent as an "object file system"). The object store is used to host the data in the form of objects. The name of the object is derived from the object's content using, for example, a strong cryptographic hash, and represents a "fingerprint" of the content. These fingerprints of the objects are globally unique because: (i) no two objects can have the same content (because in that case, they would by definition have the same fingerprint and therefore be the same object); and (ii) two objects with different content will always have different fingerprints. Object stores have an "index" that tracks all of the objects and associates each object's name with its location. Decl. ¶ 25 (Ex. 1102).

The '799 patent describes a "namespace file system" at the top of the storage

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