



**Sling TV, L.L.C., et al. (Petitioners)**  
**v.**  
**Realtime Adaptive Streaming LLC (Patent Owner)**

**Demonstratives**  
**Trial No. IPR2018-01342**  
**U.S. Patent No. 8,934,535**

***Before Hon. Kevin W. Cherry, Garth D. Baer, and Nabeel U. Khan,***  
***Administrative Patent Judges***

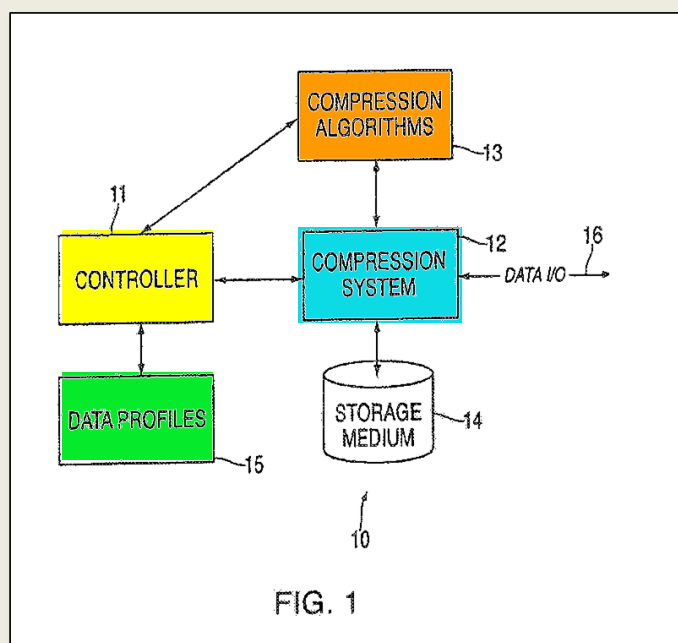
- **Background and Summary of Issues**
- Construction of “Access Profile”
- Grounds 1 and 2: Dvir
  - Issue 1: Single Disclosure Demonstrates Anticipation
  - Issue 2: “Access Profiles”
  - Issue 3: “Compressors Using Asymmetric Data Compression”
  - Issue 4: “Data Block”
- Ground 3: Dvir and Ishii
  - Issue 1: Explicit and Art-Specific Motivations to Combine

## Summary of Grounds

Ground	Claims	Basis for Rejection
Ground 1	1, 2, 9, 10, 14	Anticipated by Dvir - 35 U.S.C. § 103
Ground 2	1, 2, 9, 10, 14	Obvious over Dvir - 35 U.S.C. § 103
Ground 3	3-6, 8, 11, 12	Obvious over Dvir in view of Ishii - 35 U.S.C. § 103

## Alleged Innovation of the '535 Patent – Selecting Compression Algorithms Suitable for the Data Type

- The '535 Patent's controller (11) uses data profiles (15) having “access profiles” for selecting suitable compression algorithms for a particular data type



The controller 11 utilizes information comprising a plurality of data profiles 15 to determine which compression algorithms 13 should be used by the compression system 12. In a preferred embodiment, the compression algorithms 13 comprise one or more asymmetric algorithms. As noted above, with asymmetric algorithms, the compression ratio is typically greater than the compression ratios obtained using symmetrical algorithms. Preferably, a plurality of asymmetric

In a preferred embodiment, the overall throughput (bandwidth) of the system 10 is one factor considered by the controller 11 in deciding whether to use an asymmetric or symmetrical compression algorithm for processing data stored to, and retrieved from, the storage device 14. Another factor that is used to determine the compression algorithm is the type of data to be processed. In a preferred embodiment, the data profiles 15 comprise information regarding predetermined access profiles of different data sets, which enables the controller 11 to select a suitable compression algorithm based on the data type. For instance, the data profiles may comprise a map that associates different data types (based on, e.g., an extension) with preferred one(s) of the compression algorithms 13. For example, preferred access profiles consider

## Alleged Innovation of the '535 Patent – Selecting Compression Algorithms Suitable for the Data Type

- The '535 Patent uses the “access profiles” to link the “data type” with the compression algorithm
- For example, the '535 Patent links “Data Types” with “Access Profile 1” to an “Asymmetrical (Slow compression)” compression algorithm

In another aspect, a system for providing bandwidth sensitive data compression comprises a plurality of **access profiles**, operatively accessible by the controller that enables the controller **to determine a compression routine that is associated with a data type of the data to be compressed.** The access profiles comprise information that enables the controller to select a suitable compression algorithm that provides a desired balance between execution speed (rate of compression) and efficiency (compression ratio).

the type of data to be processed. In a preferred embodiment, the data profiles **15** comprise information regarding predetermined access profiles of different data sets, which enables the controller **11** to select a suitable compression algorithm based on the data type. For instance, **the data profiles may comprise a map that associates different data types (based on, e.g., a file extension) with preferred one(s) of the compression algorithms 13.** For example, preferred access profiles considered by the controller **11** are set forth in the following table.

Access Profile	Example Data Types	Compression Algorithm	Compressed Data Characteristics	Decompression Algorithm
1. Write few, Read many	Operating systems, Programs, Web sites	Asymmetrical (Slow compress)	Very high compression ratio	Asymmetrical (Fast decompress)
2. Write many, Read few	Automatically updated inventory database	Asymmetrical (Fast compress)	Very high compression ratio	Asymmetrical (Slow decompress)
3. Similar number of Reads and Writes	User generated documents	Symmetrical	Standard compression ratio	Symmetrical

DISH1001, 8:4-12, 11:31-39, 12:50-60; Paper 2 (Petition)

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