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(54) **SEEDING OF A WORKSPACE TO OPTIMIZE CODEC OPERATIONS**

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(52) **U.S. Cl.**

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(58) **Field of Classification Search**

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USPC 375/240, 241

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,668,089	B1 *	12/2003	Bracamonte et al.	382/239
8,804,814	B1 *	8/2014	Paris et al.	375/240
2002/0035471	A1 *	3/2002	Breton	704/233
2004/0190782	A1 *	9/2004	Nomizu et al.	382/232
2011/0238943	A1 *	9/2011	Devendran et al.	711/170
2011/0296419	A1 *	12/2011	Dumas et al.	718/101

* cited by examiner

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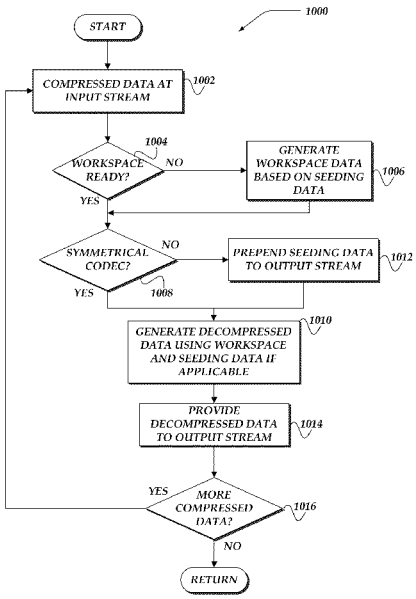
(57) **ABSTRACT**

Various embodiments are directed toward compressing and/or decompressing data communicated between one or more network devices (e.g., codec operations). In particular, embodiments are directed towards improving codec performance by seeding the computation workspace that may be used by various codec processors. The seeding data may be determined based on at least one characteristic of a particular codec and the characteristics of data that may be processed by the codec processor. Also, the codec processor may be employed to generate data for the codec workspace based on the determined seeding data. Workspace data may be generated by processing the seeding data with the same codec processor that is used for normal codec operations. The workspace generated from the seeding data may be stored for future use, such as, when a matched data stream arrives.

24 Claims, 12 Drawing Sheets