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Sebastian

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(54) **CODING NETWORK GROUPING DATA OF SAME DATA TYPE INTO BLOCKS USING FILE DATA STRUCTURE AND SELECTING COMPRESSION FOR INDIVIDUAL BLOCK BASE ON BLOCK DATA TYPE**

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(*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Related U.S. Application Data

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(51) **Int. Cl.^{7}** **G06F 17/30**; G06F 3/00; G06F 5/00; H03M 7/00; H03M 7/30

(52) **U.S. Cl.** **710/68**; 710/65; 341/51; 341/107

(58) **Field of Search** 341/51, 65, 107; 707/102, 503, 504, 505, 508; 370/474; 710/65, 68

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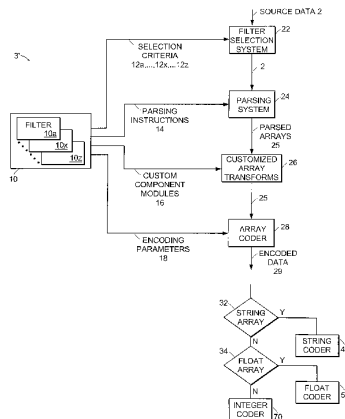
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(57) **ABSTRACT**

A preferred coding network uses an architecture called a Base-Filter-Resource (BFR) system. This approach integrates the advantages of format-specific compression into a general-purpose compression tool serving a wide range of data formats. Source data is parsed into blocks of similar data and each parsed blocks are compressed using a respectively selected compression algorithm. The algorithm can be chosen from a static model of the data or can be adaptive to the data in the parsed block. The parsed blocks are then combined into an encoded data file. For decoding, the process is reversed.
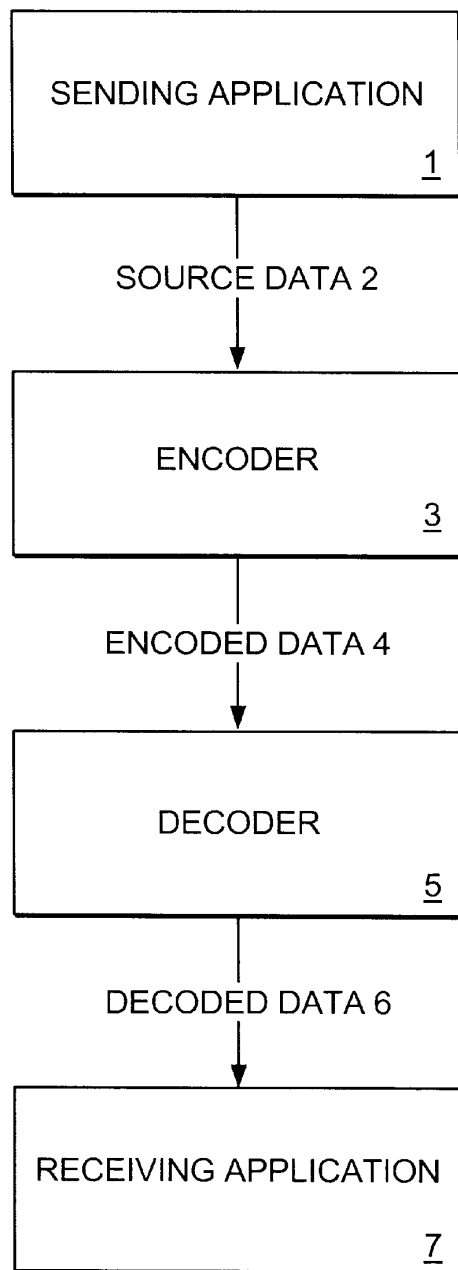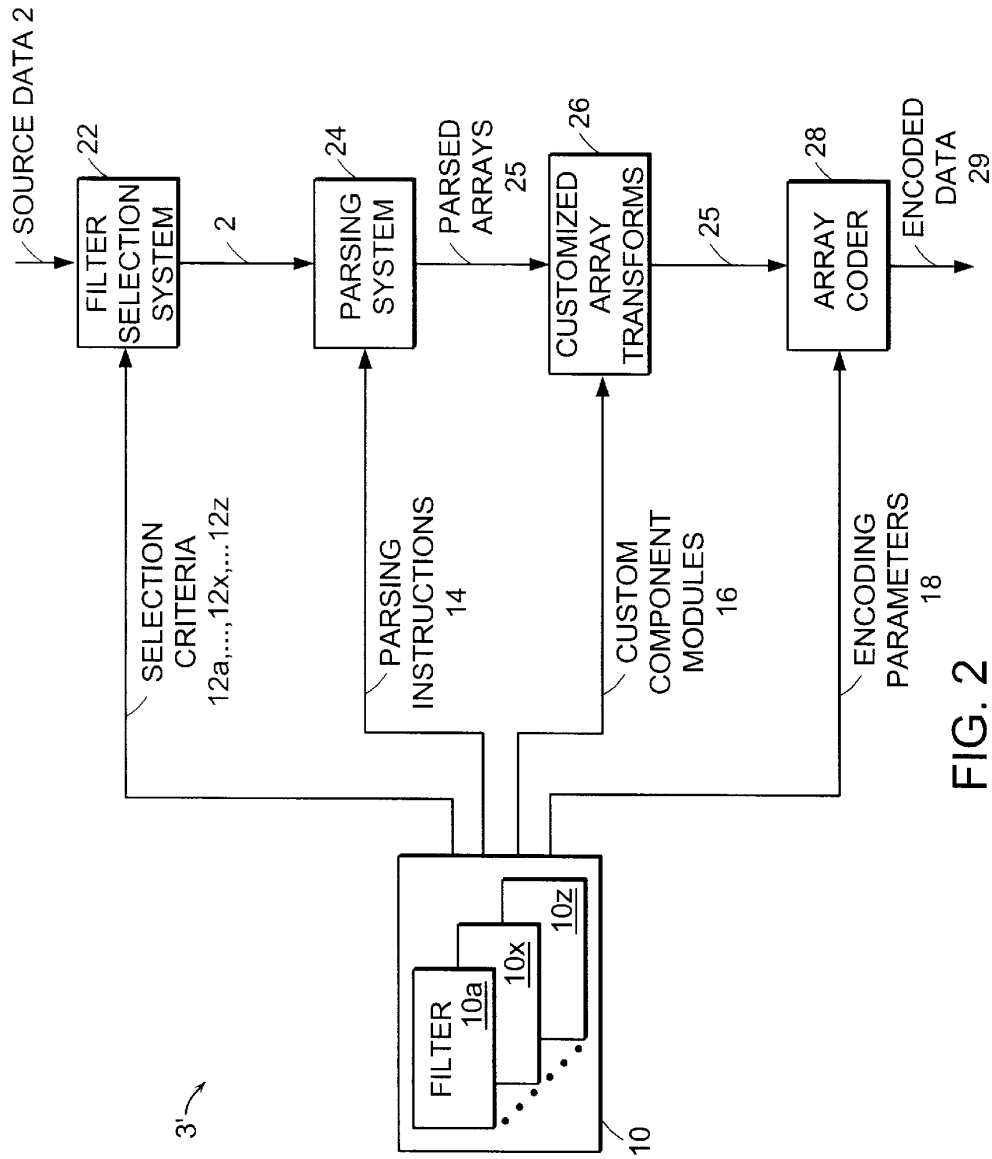
29 Claims, 8 Drawing Sheets

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│                             │
│    SENDING APPLICATION      │
│                             │
│                          1  │
└─────────────────────────────┘
              │
              │ SOURCE DATA 2
              ▼
┌─────────────────────────────┐
│                             │
│          ENCODER            │
│                             │
│                          3  │
└─────────────────────────────┘
              │
              │ ENCODED DATA 4
              ▼
┌─────────────────────────────┐
│                             │
│          DECODER            │
│                             │
│                          5  │
└─────────────────────────────┘
              │
              │ DECODED DATA 6
              ▼
┌─────────────────────────────┐
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│   RECEIVING APPLICATION     │
│                             │
│                          7  │
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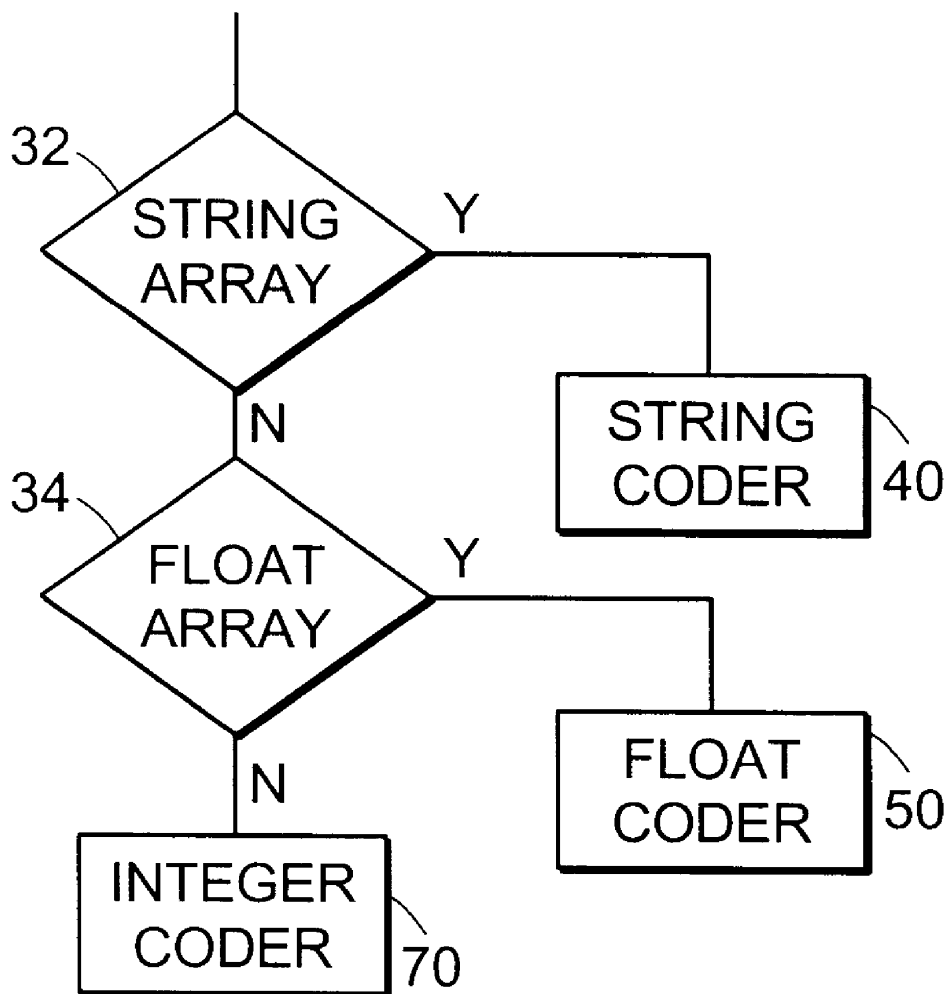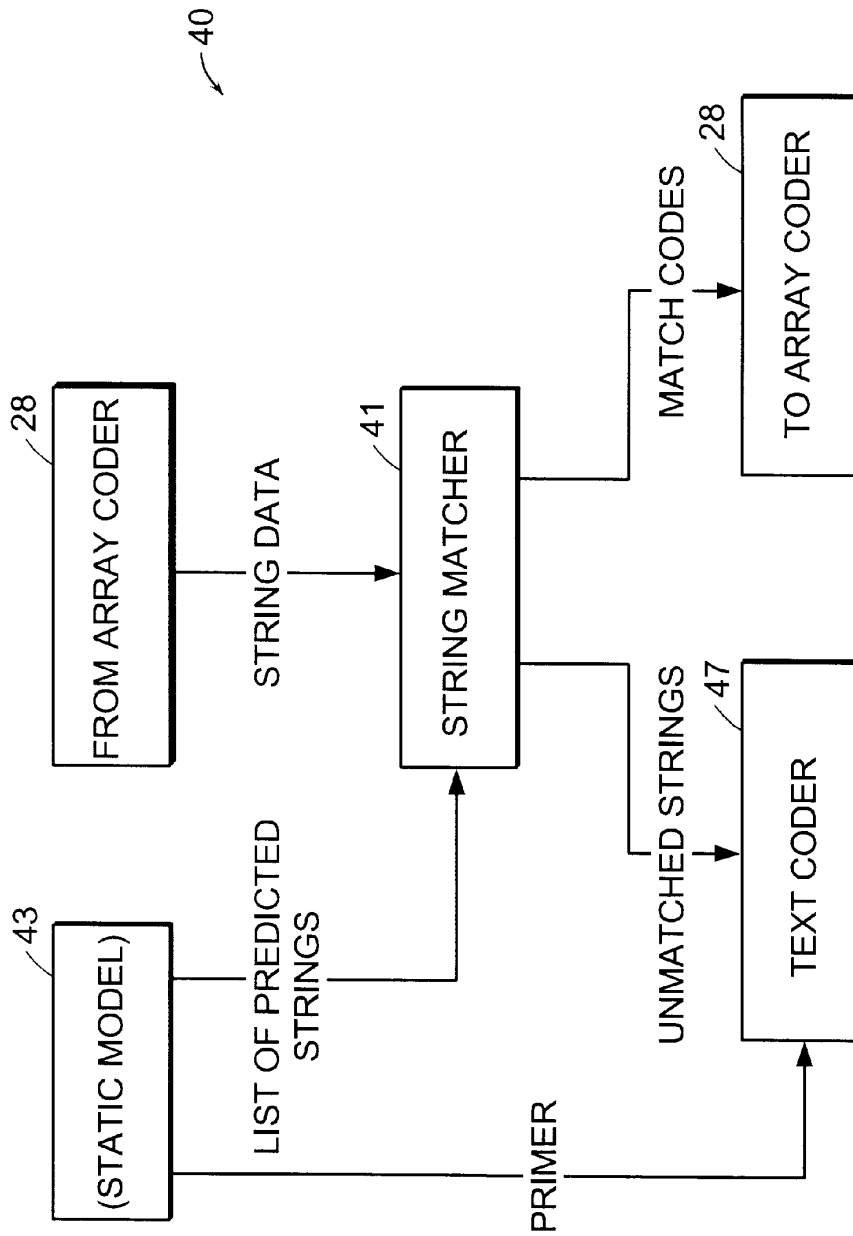
FIG. 1
PRIOR ART

FIG. 2

FIG. 3

FIG. 4

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