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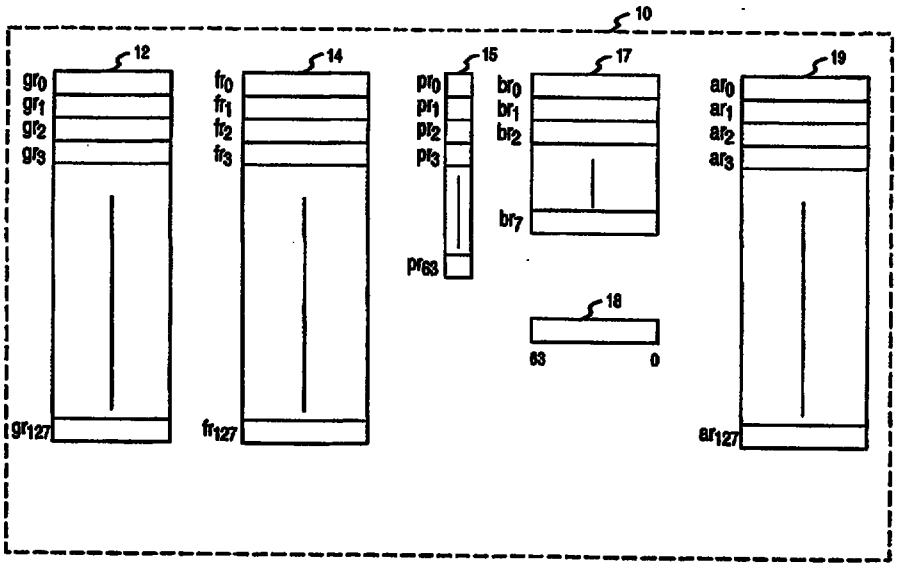
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(54) Title: PROCESSOR UTILIZING TEMPLATE FIELD INSTRUCTION ENCODING



(57) Abstract

A processor having a large register file (10) utilizes a template field for encoding a set of most useful instruction sequences in a long instruction word format. The instruction set of the processor includes instructions which are one of the plurality of different instruction types. The execution units of the processor are similarly categorized into different types, wherein each instruction type may be executed on one or more of the execution unit types. The instructions are grouped together into 128–bit sized and aligned containers called bundles, with each bundle includes a plurality of instruction slots and a template field that specifies the mapping of the instruction slots to the execution unit types.