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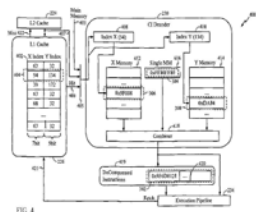(21) Application No.8904/CHENP/2013 A

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(54) Title of the invention : METHODS AND APPARATUS FOR STORAGE AND TRANSLATION OF ENTROPY ENCODED SOFTWARE EMBEDDED WITHIN A MEMORY HIERARCHY

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(57) Abstract :
A custom entropy bounded encoding in an X index and Y index format is generated for a segment of program code along with a custom decoding dictionary made up of an X pattern memory and a Y pattern memory. In run time decoding a mix mask is used with an X pattern selected from the X pattern memory according to the X index and with a Y pattern selected from the Y pattern memory according to the Y index to determine an executable instruction. The mix mask identifying the order of bits to combine from the X pattern and the Y pattern. Appropriate hardware implementation and placement of the decoding mechanism and address translation is described during execution of an encoded code segment. Methods including a genetic process are also described to determine the X index the Y index the X patterns the Y patterns and one or more mix masks.

FIG. 4

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