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(54) Title: CYPHERGENICS-BASED ECOSYSTEM SECURITY PLATFORMS

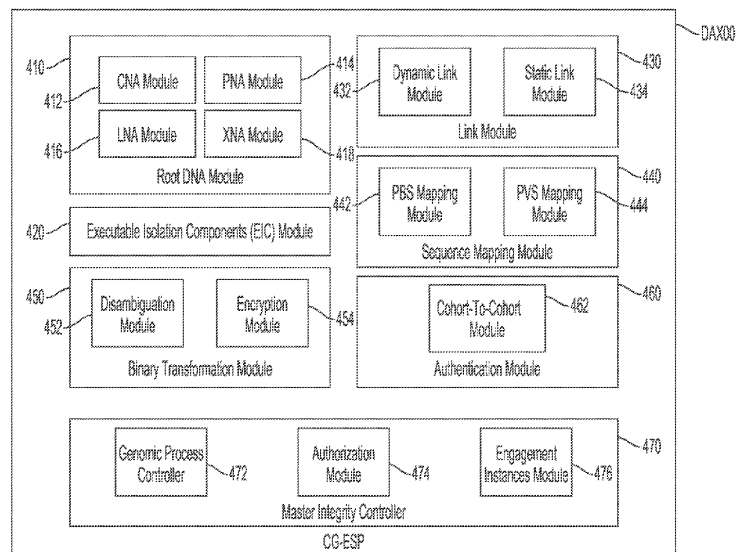


FIG. 4

(57) **Abstract:** The present disclosure relates to Cyphergenics(CG)-enabled security platforms and corresponding digital genomic constructions that exhibit controlled entropy yet are subject to digital modification and reconstruction by computationally complex functions and processes without loss of genomic integrity. These constructions enable formation of comprehensively secure hyper-scalable digital ecosystems, enclaves, and/or digital cohorts having mutual identity of interests, and application specific security architectures based on genomic network topologies that are interoperable with contemporary application and networks stacks. In some implementations of the disclosure, the security platforms may be configured to facilitate secure data exchange between ecosystem members. In some aspects of the disclosure, the security platforms are configured to facilitate virtual trusted execution domains, whereby a processing environment is configured to perform CG-based encoding and decoding of instructions and program data. In some aspects of the disclosure, the

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security platforms are configured to facilitate material data chains (MDCs).