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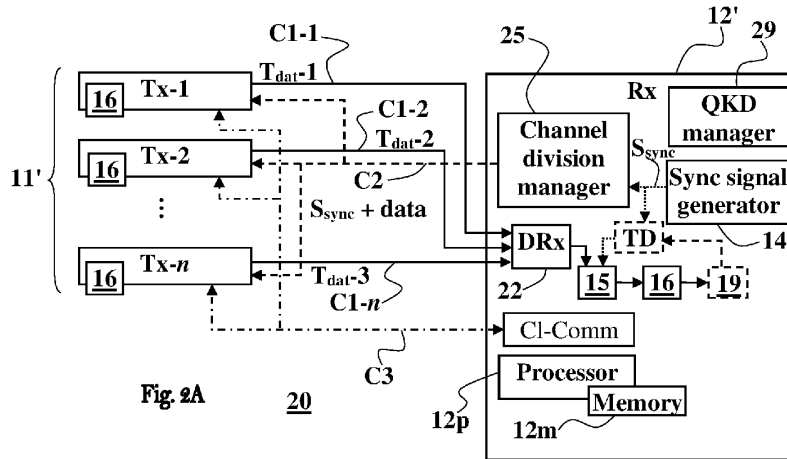
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(54) **Title:** QUANTUM BASED SYSTEM AND METHOD OF MULTIPOINT COMMUNICATIONS



(57) **Abstract:** A communication network comprising at least one receiver system optically coupled to a plurality of transmitter systems for transmission of synchronization signals generated by the at least one receiver system to the plurality of transmitter systems over a unidirectional synchronization channel. The at least one receiver system configured to embed into the synchronization signals thereby generated additional data indicative of an internal time count thereof for synchronization of transmission of data/signals from each one of the plurality of transmitter systems to said at least one receiver system over a sparse data/signals unidirectional communication channel.