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(54) **PREDICTIVE AND RESIDUAL CODING OF
SPARSE SIGNALS FOR WEIGHT UPDATE
COMPRESSION**

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(57) **ABSTRACT**

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An apparatus comprising: at least one processor; and at least one non-transitory memory storing instructions that, when executed by the at least one processor, cause the apparatus at least to: receive a signal, the signal comprising a sparse signal; perform residual coding on the signal; perform predictive coding on the signal; determine a residual, the residual comprising a residual of the signal and a base signal or a residual of an approximation and the base signal, the approximation being an approximation of the signal; and determine whether to transmit the residual or the signal over a communication channel.

