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**MYUNG et al.**(10) **Pub. No.: US 2023/0231756 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **TRANSMITTING APPARATUS AND  
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LTD.**, Suwon-si (KR)(21) Appl. No.: **18/186,529**(22) Filed: **Mar. 20, 2023****Related U.S. Application Data**(63) Continuation of application No. 17/344,014, filed on  
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(2013.01); **H03M 13/152** (2013.01)(57) **ABSTRACT**

A transmitting apparatus is disclosed. The transmitting apparatus includes an encoder to perform channel encoding with respect to bits and generate a codeword, an interleaver to interleave the codeword, and a modulator to map the interleaved codeword onto a non-uniform constellation according to a modulation scheme, and the constellation may include constellation points defined based on various tables according to the modulation scheme.

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