



(12) **United States Patent**  
**Chen et al.**

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(54) **EPDCCH RESOURCE AND QUASI-CO-LOCATION MANAGEMENT IN LTE**

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(58) **Field of Classification Search**  
CPC ..... H04L 5/001; H04W 72/082  
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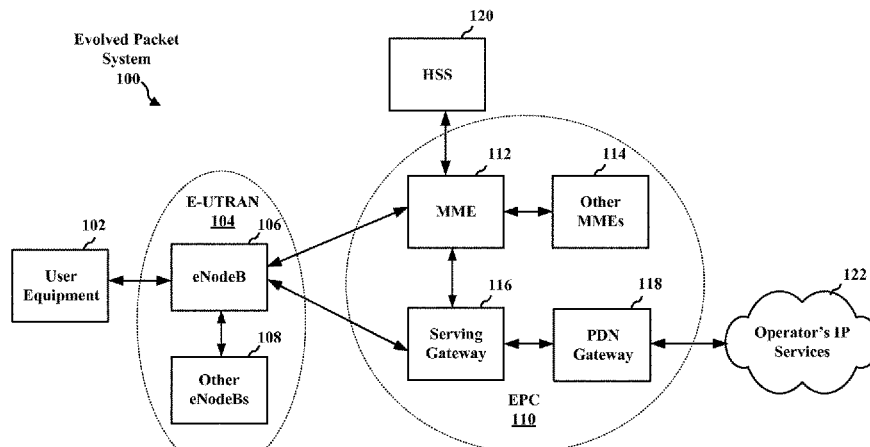
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(57) **ABSTRACT**

A method, an apparatus, and a computer program product for wireless communication are provided. In an aspect, the apparatus may determine at least a first and second resource set configured for a control channel and may determine a common set of aggregation levels for the first and second resource sets. The apparatus may further determine first rate-matching parameters for the first resource set and second rate-matching parameters for the second resource set, and may process the control channel using the common set of aggregation levels and the first and second rate-matching parameters.

**18 Claims, 18 Drawing Sheets**



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**H04B 7/024** (2017.01)  
**H04B 7/06** (2006.01)  
**H04L 1/18** (2006.01)  
**H04L 25/02** (2006.01)
- (52) **U.S. Cl.**  
CPC ..... **H04L 1/1812** (2013.01); **H04L 5/0035** (2013.01); **H04L 5/0048** (2013.01); **H04L 5/0053** (2013.01); **H04L 5/001** (2013.01); **H04L 25/0204** (2013.01)
- (58) **Field of Classification Search**  
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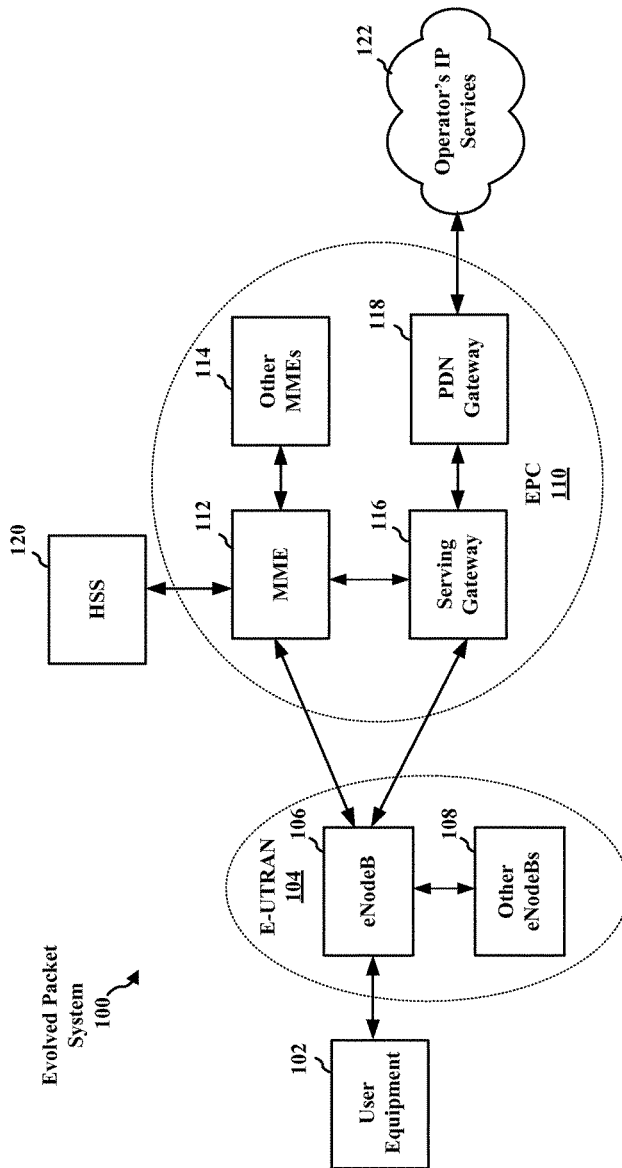


FIG. 1

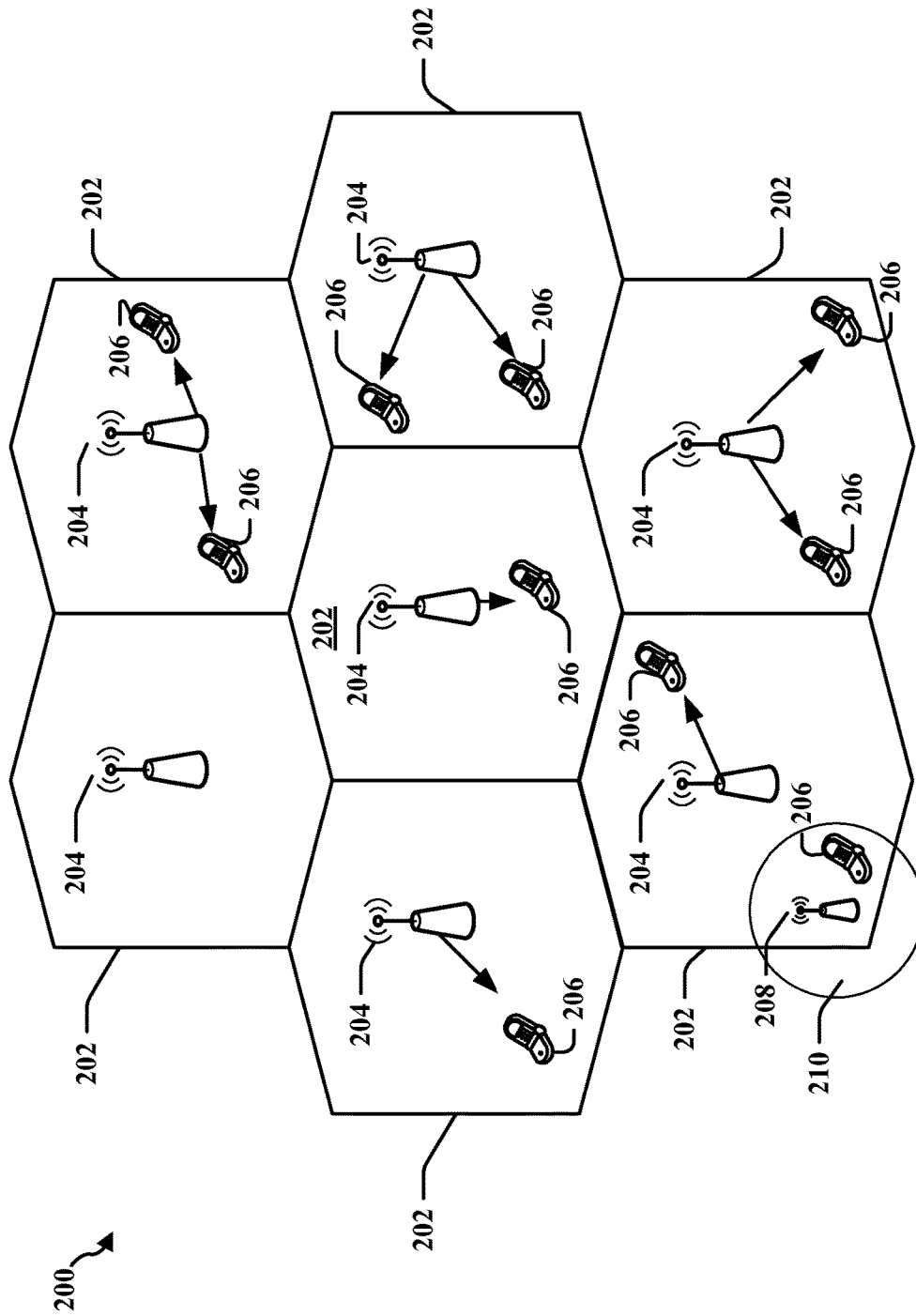


FIG. 2

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