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**Da Silva et al.**

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(54) **DIRECTED WIRELESS COMMUNICATION**

(71) Applicant: **XR Communications, LLC**, Solana Beach, CA (US)

(72) Inventors: **Marcus Da Silva**, Spokane, WA (US); **Vahid Tarokh**, Cambridge, MA (US); **Praveen Mehrotra**, Spokane, WA (US); **William J. Crilly, Jr.**, Liberty Lake, WA (US); **James Brennan**, Sammamish, WA (US); **Robert J. Conley**, Liberty Lake, WA (US); **Siavash Alamouti**, Spokane, WA (US); **Eduardo Casas**, Vancouver (CA); **Hujun Yin**, Spokane, WA (US); **Bobby Jose**, Veradale, WA (US); **Yang-Seok Choi**, Liberty Lake, WA (US)

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(58) **Field of Classification Search**  
None

See application file for complete search history.

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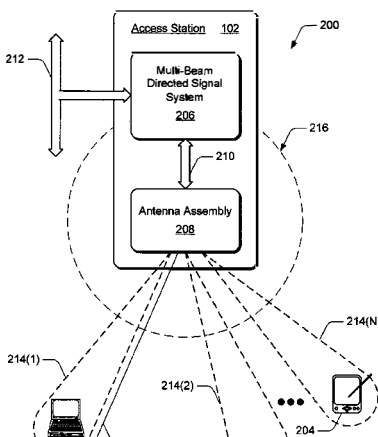
*Primary Examiner* — Shuwang Liu  
*Assistant Examiner* — Gina M McKie

(74) *Attorney, Agent, or Firm* — Klein, O'Neill & Singh, LLP

(57) **ABSTRACT**

Disclosed herein are methods and apparatuses configured to direct wireless communication. In some embodiments, a network apparatus is configured to: receive a first signal transmission from a remote station via a first antenna element of an antenna and a second signal transmission from the remote station via a second antenna element of the antenna simultaneously; determine first signal information for the first transmission; determine second signal information for the second transmission, wherein the second signal information is different than the first signal information; determine a set of weighting values based on the first signal information and the second signal information, wherein the set of weighting values is configured to construct one or

(Continued)



more beam-formed transmission signals; and generate the one or more beam-formed transmission signals based on the set of weighting values for transmission to the remote station.

**19 Claims, 18 Drawing Sheets**

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