

## Title (en)

Power combining and energy radiating system and method

## Title (de)

System und Verfahren zur Leistungskombination und Energiestrahlung

## Title (fr)

Système et procédé de groupement de puissance et de rayonnement d'énergie

## Publication

**EP 2093832 A1 20090826 (EN)**

## Application

**EP 08250593 A 20080220**

## Priority

EP 08250593 A 20080220

## Abstract (en)

A power-combining system and method for generating a high-power coherent wavefront are generally described herein. Other embodiments may be described and claimed. The power-combining system (100) comprises a combining-radiating assembly (108) having a plurality of ports (204). Phase controllers (102) generate signals with a predetermined phase shift for an associated one of the ports. Pluralities of coherent sources (104) receive signals from an associated one of the phase controllers (102) and to provide the signals to an associated port (204) of the combining-radiating assembly (108) with the predetermined phase shifts. Energy from the ports is coherently combined and radiated to provide a coherent high-power wavefront (109). In some embodiments, the combining-radiating assembly (108) comprises a conductive patch (202) having a plurality of ports (204) spaced uniformly around the patch (202). In these embodiments, energy from the ports is coherently combined and radiated by the patch (202) to provide the coherent high-power wavefront (109).

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## CPC (source: EP)

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## Citation (applicant)

- US 2006007044 A1 20060112 - CROUCH DAVID D [US], et al
- US 4755829 A 19880705 - DINGER ROBERT J [US], et al
- US 2005073461 A1 20050407 - NORVELL BILL R [US], et al
- US 2003179139 A1 20030925 - NEMIT JEFFERY T [US], et al

## Citation (search report)

- [X] US 2006007044 A1 20060112 - CROUCH DAVID D [US], et al
- [A] US 4755829 A 19880705 - DINGER ROBERT J [US], et al
- [A] US 2005073461 A1 20050407 - NORVELL BILL R [US], et al
- [A] US 2003179139 A1 20030925 - NEMIT JEFFERY T [US], et al
- [A] TANAKA T ET AL: "CIRCULARLY POLARIZED PRINTED ANTENNA COMBINING SLOTS AND PATCH", IEICE TRANSACTIONS ON COMMUNICATIONS, COMMUNICATIONS SOCIETY, TOKYO, JP, vol. E90B, no. 3, 1 March 2007 (2007-03-01), pages 621 - 629, XP001541881, ISSN: 0916-8516

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EP4325881A4; FR3062524A1; CN110506365A; IL268066B; IL268066B2; WO2018141882A1; US10992061B2

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