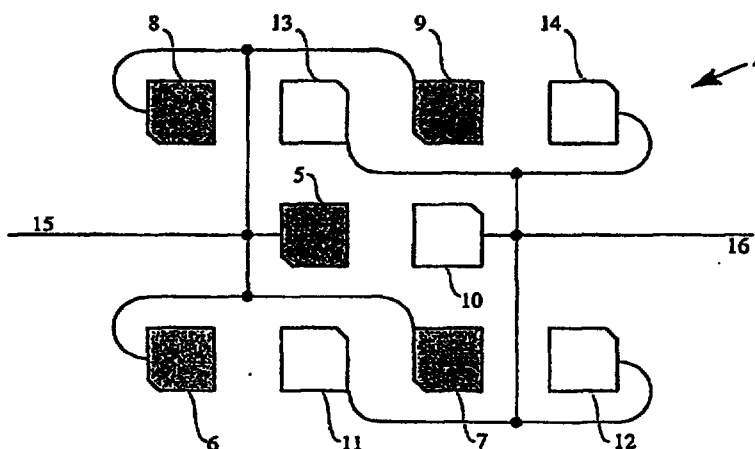




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (21) International Application Number: PCT/SE99/00936<br>(22) International Filing Date: 31 May 1999 (31.05.99)<br>(30) Priority Data:<br>9802234-6                      24 June 1998 (24.06.98)                      SE<br>(71) Applicant (for all designated States except US): COMBITECH<br>TRAFFIC SYSTEMS AB [SE/SE]; P.O. Box 1063, S-551<br>10 Jönköping (SE).<br>(72) Inventor; and<br>(75) Inventor/Applicant (for US only): LÖVSÉN, Håkan [SE/SE];<br>Ektunavägen 89, S-589 33 Linköping (SE).<br>(74) Agent: LUNDMARK, Jan-Erik; Saab AB, Patent Dept., S-581<br>88 Linköping (SE). | (81) Designated States: AU, BR, CN, KR, NO, SG, US, European<br>patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,<br>IE, IT, LU, MC, NL, PT, SE).<br><br>Published<br><i>With international search report.</i><br><i>Before the expiration of the time limit for amending the</i><br><i>claims and to be republished in the event of the receipt of</i><br><i>amendments.</i><br><i>In English translation (filed in Swedish).</i> |                                                                                                                               |

(54) Title: DEVICE FOR POSITION DETERMINATION BY MEANS OF RADIO WAVES



## (57) Abstract

A device for determining the position of a vehicle on a roadway by using radio waves which are emitted from the device and reflected by the vehicle and received by at least two array antennas (1, 2) arranged across the roadway, wherein the array antennas (1, 2) comprise a number of antenna elements (5-14), one of the antenna elements in the respective array antenna constituting the phase center (5, 10) of the array antennas, and wherein the antenna elements (5-14) of the array antennas are connected to one another such that the distance (d) between the phase centers (5, 10) of the array antennas (1, 2) included is smaller than half the width of an individual array antenna (1, 2).