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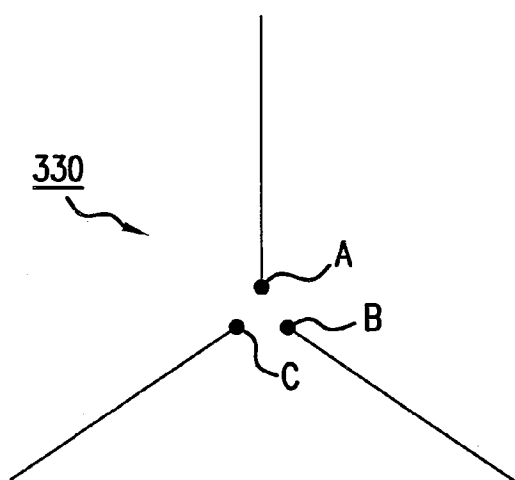
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(54) Title: A METHOD AND APPARATUS FOR TWO-DIMENSIONAL FILTERING IN A COMMUNICATIONS SYSTEM USING A TRANSFORMER SYSTEM



(57) Abstract: The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)). A transformer system (300) comprises a transformer star winding (310) to be coupled to antenna system (330), and a transformer delta winding (320) disposed with the transformer star winding. The transformer star winding includes a set of star elements and the transformer delta winding includes a set of delta elements each being substantially perpendicularly disposed with a corresponding star element from the set of star elements.

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/26305

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01Q 21/00, 21/20; H01F 27/28; H01P 5/12

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 333/100, 101; 336/180, 182, 184, 186, 187, 232; 343/700ms, 788, 799, 853

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST (TRANSFORMER, WINDING, ANTENNA, PHASE, SIGNAL)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,717,876 A (VOLKERS, DECESSED ET AL) 20 FEBRUARY 1973, (20/02/73) SEE ENTIRE DOCUMENT.	1-28
A	US 3,828,439 A (ISHIKAWA ET AL) 13 AUGUST 1974, (13/08/74) SEE ENTIRE DOCUMENT.	29-36
A	US 4,194,239 A (JAYARAM ET AL) 18 MARCH 1980, (18/03/80) SEE ENTIRE DOCUMENT.	29-36
A	US 4,485,343 A (MILKOVIC) 27 NOVEMBER 1984, (27/11/84) SEE ENTIRE DOCCUMENT.	29-36

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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INTERNATIONAL SEARCH REPORT

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US CL :

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