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[Continued on next page]

(54) Title: AUTOMATED POLICY-BASED NETWORK DEVICE CONFIGURATION AND NETWORK DEPLOYMENT

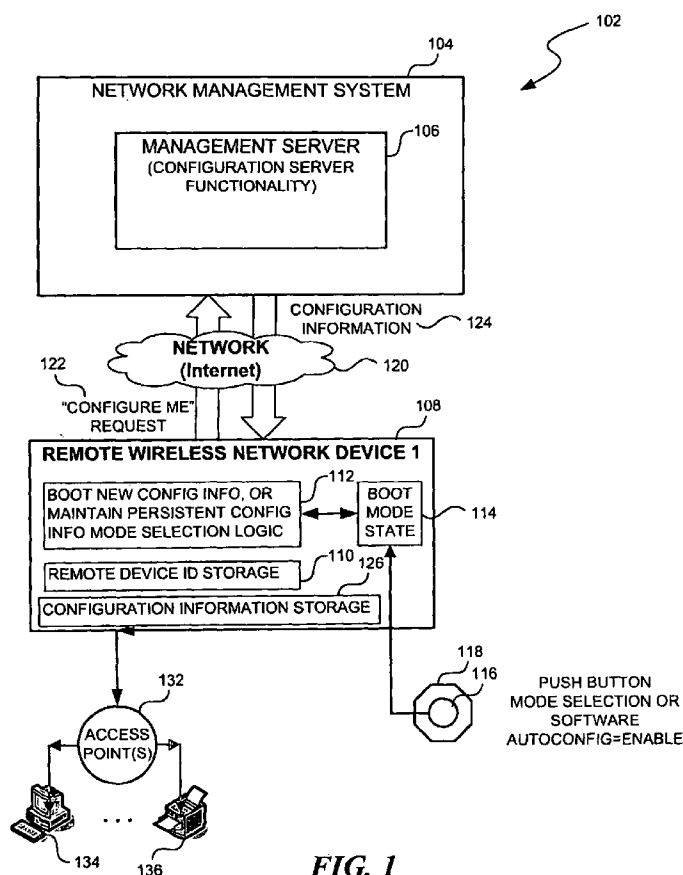


FIG. 1

(57) Abstract: Automatically configuring network device, network system architecture, and method for configuring one or a plurality of devices on a network. Device and network system architectures and methods for automatically self-initiating and configuring one, a plurality, or hundreds of wired or wireless network devices. Autoconfiguring wireless Local Area Network switch and access point devices connected to the switch. Method for accessing remote server by a device to acquire device configuration information. Method for deploying a network including at least one network device at a facility without the participation of a person having knowledge of networks or network devices at the facility. Computer program and computer program product.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 15/177 (2008.01)

USPC - 709/220

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)
USPC - 709/220Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 709/220, 221, 222; 370/254 -- text search, see search terms below

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

PubWEST(PGPB,USPT,USOC,EPAB,JPAB); DialogPRO(Engineering); Google Scholar

Search Terms Used: configur, device, network, policy, rule, request, remote, activat, data, information, lookup, look, up, table, access, point, switch, button, crypt, authenticat, mutual, SSL, repudiat, digital, signature (-- cont'd on p. 8 --)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,725,260 B1 (PHILYAW) 20 April 2004 (20.04.2004), especially Figs 3, 25, 29, 31, 34; col 6, ln 16-20; col 7, ln 56-57; col 13, ln 59, 65; col 16, ln 57-58, 60-65; col 17, ln 49-50; col 25, ln 42; col 26, ln 20-23; col 28, ln 52-60; col 31, ln 11-14, 48-51; col 32, ln 36-41, 60, 63-67; col 33, ln 1-14, 24; col 35, ln 21, 27; col 44, ln 8-12; col 45, ln 20-22, 27-30, 34-36, 45-49, 55-67; col 46, ln 1-23; col 48, ln 32-40.	1-32, 46-50, 64-76
Y	US 6,978,301 B2 (TINDAL) 20 December 2005 (20.12.2005), especially Figs 2, 3, 4, 7, 8, 9; col 3, ln 48-67; col 4, ln 1; col 5, ln 31-39, 42-44, 49-53, 63-66; col 6, ln 37, 42-45, 53-60; col 7, ln 23-27, 45-46, 52-55; col 8, ln 43-49, 51-61; col 9, ln 14-19; col 10, ln 51-57, 61-67; col 11, ln 16-28.	1-32, 46-50, 64-76
Y	US 6,336,152 B1 (RICHTMAN et al.) 01 January 2002 (01.01.2002), especially Figs 1, 8, 14; col 3, ln 18-32; col 13, ln 15-17, 20-25.	7, 8, 11, 18
Y	US 2005/0193103 A1 (DRABIK) 01 September 2005 (01.09.2005), especially Fig 6; para [0017], [0063], [0083]-[0084], [0086], [0089], [0117], [0119]-[0120].	24-27, 31

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"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

"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

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International application No.

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group 1, claims 1-32, 46-50, and 64-76, drawn to a method for configuring a remote device on a network.

Group 2, claims 33-40, 51-63, 77 drawn to a method for deploying a network infrastructure.

Group 3, claims 41-45, drawn to an autoconfiguring network device.

The inventions listed as Groups 1 - 3 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature of the Group 1 invention is a method for configuring a remote device on a network. The special technical feature of the Group 2 invention is a method for deploying a network infrastructure. The special technical feature of the Group 3 invention is an autoconfiguring network device. None of these special technical features are common to the other groups, nor do they correspond to a special technical feature in the other groups. Therefore, unity of invention is lacking.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-32, 46-50, and 64-76

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.