

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 October 2003 (30.10.2003)

PCT

(10) International Publication Number
WO 2003/090163 A3

(51) International Patent Classification⁷: **G06N 3/08**

(21) International Application Number:
PCT/US2003/011713

(22) International Filing Date: 15 April 2003 (15.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/373,780 19 April 2002 (19.04.2002) US
60/373,977 19 April 2002 (19.04.2002) US
60/374,020 19 April 2002 (19.04.2002) US
60/374,024 19 April 2002 (19.04.2002) US
60/374,041 19 April 2002 (19.04.2002) US
60/374,064 19 April 2002 (19.04.2002) US
10/374,406 26 February 2003 (26.02.2003) US

(71) Applicant: **COMPUTER ASSOCIATES THINK, INC.**
[US/US]; One Computer AssociateS Plaza, Islandia, NY
11749 (US).

(72) Inventors: **MENG, Zhuo**; 8374 Chestnut Boulevard,
Broadview Heights, OH 44147 (US). **PAO, Yoh-Han**;
2721 Scarborough Road, Cleveland Heights, OH 44106
(US).

(74) Agents: **JAWORSKI, Richard, F.** et al.; Cooper & Dun-
ham LLP, 1185 Avenue of the Americas, New York, NY
10036 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

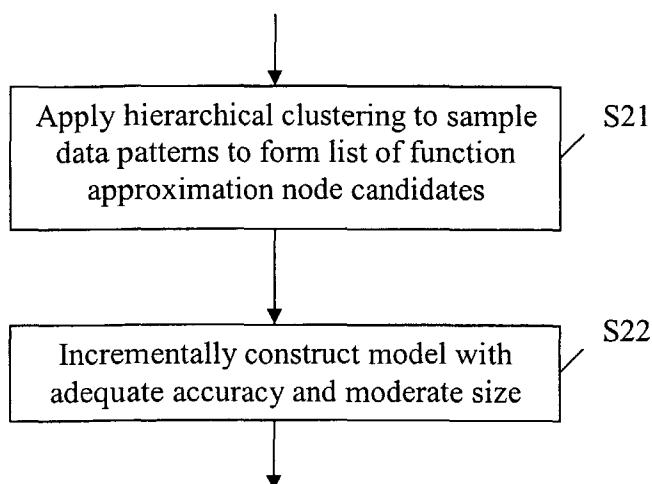
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
16 December 2004

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: AUTOMATIC NEURAL-NET MODEL GENERATION AND MAINTENANCE



(57) Abstract: Method of incrementally forming and adaptively updating a neural net model are provided. A function approximation node is incrementally added to the neural net model. Function parameters for the function approximation node are determined and function parameters of other nodes in the neural network model are updated, by using the function parameters of the other nodes prior to addition of the function approximation node to the neural network model.

WO 2003/090163 A3