

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [X] To Chairmen

D E C I S I O N
of 28 September 2000

Case Number: T 0575/98 - 3.4.2

Application Number: 92911452.8

Publication Number: 0580768

IPC: H05B 7/148

Language of the proceedings: EN

Title of invention:

Improved control system for electric arc furnace

Applicant:

NEURAL APPLICATIONS CORPORATION

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 54, 111(1)

Keyword:

"Novelty with respect to prior art on which the refusal was based (yes, after amendment)"

"Remittal to first instance for further prosecution"

Decisions cited:

-

Catchword:

-



Case Number: T 0575/98 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 28 September 2000

Appellant: NEURAL APPLICATIONS CORPORATION
University of Iowa Oakdale Research Park
2600 Crosspark Road
Coralville
Iowa 52241 (US)

Representative: Rau, Manfred, Dr. Dipl.-Ing.
Rau, Schneck & Hübner
Patentanwälte
Königstrasse 2
D-90402 Nürnberg (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 12 December 1997
refusing European patent application
No. 92 911 452.8 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: A. G. Klein
B. J. Schachenmann

Summary of Facts and Submissions

- I. European patent application No. 92 911 452.8 (International Publication No. WO 92/19 083) was refused by decision of the Examining Division.

The reason for the refusal was that the claimed subject-matter lacked novelty in view of the contents of the document

D3: US-A-4 881 160.

- II. The appellant (applicant) lodged an appeal against the decision. Together with the statement of grounds two sets of amended claims were filed as main and auxiliary request.
- III. On the day of the oral proceedings held on 28 September 2000, at which the appellant did not appear, a new request was filed as a reaction of a communication of the Board dated 10 February 2000.
- IV. The appellant now requests that the decision under appeal be set aside and that the case be remitted to the first instance with the order to grant a patent on the basis of a claim 1 corresponding to claim 11 as originally filed with the description to be adapted.

Claim 11 as originally filed, on which the present decision is based, reads as follows:

"11. A process control system comprising: at least two trainable neural networks, including a process emulator neural network arranged to emulate a process exhibiting a behavior and a regulator neural network arranged to

regulate said process;

means for obtaining a measurement of a present state of said process and presenting said measurement of the present state of said process to said regulator neural network means;

means for establishing a desired state of said process;

said regulator neural network means being arranged to output a process control signal adapted to control said process;

means for presenting the measurement of the present state of said process and said process control signal to said process emulator neural network means, said process emulator neural network means being arranged to calculate a simulated state of said process as a function of said process control signal;

means for comparing said simulated state with said desired state to derive a process control error signal;

means for training said regulator neural network means as a function of said process control error signal;

means for providing a reference signal representing the state of said process and exemplary of the behavior of said process;

means for comparing said reference signal with said simulated state to derive a process emulator error signal;

and means for training said process emulator neural

network means as a function of said process emulator error signal."

Reasons for the Decision

1. The appeal is admissible.
2. Claim 1 in accordance with the appellant's request corresponds to claim 11 as originally filed.

As compared to the claim on which the appealed decision was based, the present claim 1 comprises in substance the additional limitations that the process control system it defines further comprises a process emulator, that both the regulator and the process emulator consist of a trainable neural network and that the two networks are arranged so as to cooperate in a way to achieve mutually improving performance.

None of these additional features is disclosed in document D3. The reasons for the refusal set out in the appealed decision, namely that the claimed subject-matter lacked novelty in view of the contents of document D3, thus no longer hold against the amended version of the claim.

Thus, the present request overcomes the objection of the Examining Division on which the refusal was based.

3. The Examining Division has not yet had an opportunity to assess the allowability of the present version of claim 1.

Accordingly the Board deems it appropriate in the

present circumstances to make use of the discretion given to it by Article 111(1) EPC to remit the case to the Examining Division for further prosecution on the basis of present claim 1.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of a new claim 1 corresponding to claim 11 as originally filed.

The Registrar:

The Chairman:

P. Martorana

E. Turrini