## **Neural Nets**

Attendees:

Greg Louis (chairman) Greg Dickerhoof (secretary) R.J. Brown Anthony A. Kobylkin Jim Callahan H G.-E. April E-Eduardo Borges E Michael Pandolfo St Adam Meggitt C Donald Howarth C

Harvard Softworks Ecole Polytechnique de Montreal Ecole Polytechnique de Montreal Stratus Computers Control Automation Control Automation

## Summarized Minutes of Neural Nets Working Group

The session began with some additional background information from Bob Brown on the effects of sigmoid activation function and a family tree recognition model. "Gradient Back-flow" is the process necessary for the net to learn. Optical character recognition has used neural techniques for the past 15 years. Feedback in a net with sigmoid activation results in an infinite chain of neurons (the cul de sac).

There was some controversy on the following issues:

-whether neural nets are applicable to useful work

-goal doesn't need to emulate the brain

-complexity of neurons (not weights, but inconnects)

-dolphin sense

It was noted by Bob Brown that the conference revealed some surprisingly encouraging...

Stability was identified as a very difficult issue, often ignored.

Generally, this was an informational meeting for the group members, with no specific directions to submit to the conference at large.