

System and Method of Handwritten Character Recognition

Contact

Brian Wright
Auburn University
Office of Technology Transfer
334-844-4977
brian.wright@auburn.edu
http://ott.auburn.edu/
Reference: Handwritten
Character Recognition

Inventor

Dr. Richard O. Chapman
Associate Professor
Computer Science and
Software Engineering

William "Amos" Confer
Doctoral Candidate
Computer Science and
Software Engineering



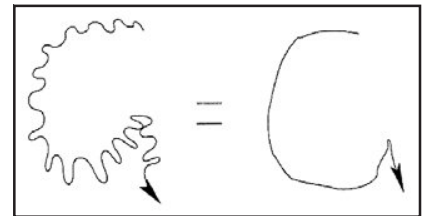
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Overview

Auburn University seeks a licensee or development partner for an invention that is embedded in a robust software program for recognizing handwritten characters. This dynamic algorithm is flexible, adaptable, highly accurate, uses limited system requirements and is well suited for noisy writing environments (e.g., inside a vehicle). This technology has data entry applications for:

- PDAs and tablet PCs
- Individuals with impaired motor skills
- Field service (sales, insurance, maintenance, etc.) and commuters/travelers
- Programmable, interactive toys
- Physicians and medical service providers



Advantages

- Customizable to any script, including Asian characters
- Adapts to the handwriting of each individual user
- Achieves very high accuracy (95-98 percent)
- Provides implicit noise reduction
- Runs on low-end systems (20 MHz processor)
- Requires less memory (40 kb) than competing systems
- Works with any pointing device (e.g., stylus, touch-pad or mouse)

Description

This invention enables computer-based recognition of single-stroke, handwritten characters or symbols. Unlike existing methods such as Graffiti, Jot, or Unistrokes that are designed around a predetermined alphabet, this invention handles arbitrary characters and symbols. Thus, each user may design his/her alphabet based on the idiosyncrasies of their handwriting. In addition, this software recognizes characters despite noise in the writing environment. The software works successfully even when characters are written at an angle. This invention would especially help those who are unable to use a standard alphabet (such as those impaired by a nervous or muscle disorder), children learning to write, and those who work in noisy environments, such as travelers.

In addition, the software distinguishes between characters that are graphically similar (e.g., 'D' and 'P') without additional coding, allowing for a shorter program, faster processing times and higher recognition speeds (**14 characters/second** on a **30 MHz, Z80 cpu**). Thus, this invention may be implemented on relatively slow computing devices such as hand-held PDAs, calculators and toys.

Status

- United States Patent Number 6,721,452
- This invention has been tested successfully in PDAs based on Palm OS
- This invention is implementable in PDAs/Pocket PCs based on Microsoft OS

Licensing Opportunities

- This technology is available for exclusive or non-exclusive licensing
- Joint development opportunities include funded research or a joint venture