The Poetic Computer

Peter Brook
Andrew Sewell
John Dickson
Otago Polytechnic
peterb@tekotago.ac.nz

1. Introduction

Computers can simulate a variety of real world activities. Some simulation, say dice throwing, requires the generation of a string of random numbers with certain characteristics and boundedness. Why not apply a similar idea to text and call the output poetry? The principal objection is that random text makes no sense even if dictionary words are used. There is a problem with the absence of any underlying grammar. Whereas 'The cat sat on the mat' makes sense "Sat the on cat mat the' does not. To impose a reasonable structure on random words we either require a template such as 'noun-subject, verb, noun-object' or an existing poem we can write variations on. It was this latter course that the poetry writing team took.

2. The Project

We took poems by two Dunedin poets: John Dickson, currently Poet in Residence at Waikato University and Nick Ascroft, one of the best young New Zealand poets. Once the forms were established by good verse composers, computer-generated variations were written. The idea here is to take 'The cat sat on the mat' into a similar 'The feline reposed on the carpet' - nearly the same. Some examples will be displayed at the conference. As for the question whether the computer generates excellent or even passable poetry, this lies outside the scope of the paper. Suffice to say some interesting variations have been generated.

3. The Software

The underlying software is a Visual Basic for Applications program that uses the thesaurus in Microsoft Word to generate synonyms. The original poem is typed in as a simple text file and the application generates a list of synonyms associated with most words. Some words like 'the', 'a', 'of' and the like are left invariant.

4. Associated Projects

♦ We would like to visually display a poem and its variants as a three dimensional tree.
♦ Prose can be treated the same way. Could a computer write various valid versions of the same story?
♦ Antonym generation is similar to synonym generation. The computer could write a series of anti-poems, the opposite of the given poem.
♦ A plagiarism tester. How different does a piece of prose have to be before it is not flagged as plagiarism by appropriate www analysers?