

ABSTRACT

The Design of a

Hypermedia Tutorial System for

Teaching Music for the Pan

Tutorial systems for teaching music on the computer abound. Unfortunately (for the pannist), they are almost all geared to teaching music using the traditional piano keyboard. No music tutorial system exists which is specifically tailored to meet the needs of pannists or which uses the pan as the base instrument.

This thesis focuses on the design of a hypermedia tutorial system which remedies this situation. The design incorporates knowledge and research findings from several domains – Computer Science, Education and Music with particular attention to issues such as human-computer interaction, tutorial systems design and learning by discovery. However, its unique nature presented unique problems for which unique and innovative solutions had to be found. A major objective was to design a system which harnesses the power of multimedia to teach a pannist music in ways not possible before.

Given the history and background of most pannists, the overriding requirement of any pan tutoring program is that it must be very easy to use. But it is almost a programming truism that writing easy-to-use programs is an extremely difficult and time-consuming activity. It takes great skill and imagination to hide complexity behind a friendly face. In order to demonstrate that the design ideas are practical, a prototype system is presented which passes several 'design evaluation' tests. The

prototype uses the tenor pan as the base instrument. However, the design is general so that it can be easily adapted for other instruments of the steel orchestra.

The world of the pannist and the world of computers seem so far apart that the mere idea of using the computer to teach music to the pannist is revolutionary – so revolutionary, in fact, that this is indeed the first attempt to do so. This system is unique in that no one else has ever attempted to produce anything like it. Perhaps this is because of the difficulty of doing so. To demonstrate that it is possible to implement the ideas discussed for the pan is a great part of the achievement. The work described in this thesis will fill an important need – promoting the advancement of pan music by creating an environment in which musical skills for the pan can be developed and nurtured. It is indeed a signal contribution to the advancement of the music of pan, the national instrument of Trinidad and Tobago.