Empirical Modelling for Education and Business

A Workshop in the Faculty of Informatics, Burapha University, Chon Buri Campus
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Burapha University

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Expectations …

We are delighted you have joined us in this Workshop which is a *collaborative* activity.

We hope you will find this an interesting and challenging experience and can engage with the software tools and models, and the concepts and principles, as much as possible.

We hope to offer some online support, if there is interest, following the Workshop.

All comments, questions, suggestions, ideas for collaboration, etc are very welcome.

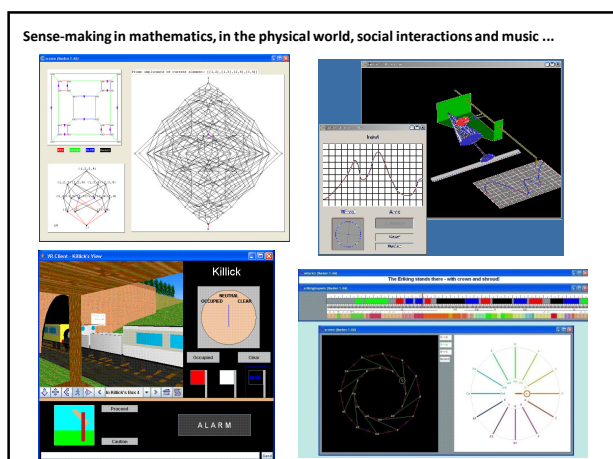# Why Empirical Modelling?

What is Empirical Modelling good for?

Empirical Modelling 'Applications'

Promising areas to benefit from an EM approach are those where there is little theory, much human interaction, and a need to be open and flexible in response to changing environments and requirements.

Many applications in recent years have been in educational technology, software development, concurrent engineering, and human computing.

Key themes of EM

Experience *before* logic and mathematics

Integrating the informal and the formal

Construal and construction

Experimenting, exploring, and sense-making

Sense-making in mathematics, in the physical world, social interactions and music ...

What EM is *really* good for …

Complementing what a program can offer by:

all those cognitive aspects that come before, around, and after a program or a solution

Including … identifying assumptions and pre-requisites, multiple viewpoints and perspectives, openness to re-interpretation, flexibility to respond to changing environments, etc.

Human Computing

Traditional computing asks

'What can be automated?' *Algorithms+programs*

Empirical Modelling asks

'How can automated processes and human processes best be integrated?'

With great difficulty! Think of the human body. Spreadsheets and EM point in promising direction

A Vision …

The hope is that, in not too many years human brains and computing machines will be coupled together very tightly and that the resulting partnership will think as no human brain has ever thought ….

JCR Licklider *Man-Computer Symbiosis* 1960