Complex Banking Operations

Using Active Structure

Where To Start

The applications for Active Structure are "Limitless"

That sounds nice, but it doesn't provide a focus.

We need to focus on applications which, while narrow, demonstrate the power and value of the new approach.

One possibility is Semantic Search
Another is Complex Banking Systems

Banking Systems

Banking Systems have more to worry about than just adding numbers. An example is AML/CTF.

The government enacts a complicated law which dictates how money can be moved around, in particular moving money to and from overseas.

How to have a complicated law represented in the bank's systems?

The Current Method

A Systems Analyst reads the legislation, and any explanatory notes provided by the regulator, writes the specification for a program (very hard).

A programmer reads the specification, writes a program (moderately hard).

To make it easier, the program will have hard limits – say, transactions over $10,000 – which can be discovered by criminals, making it easy to evade.
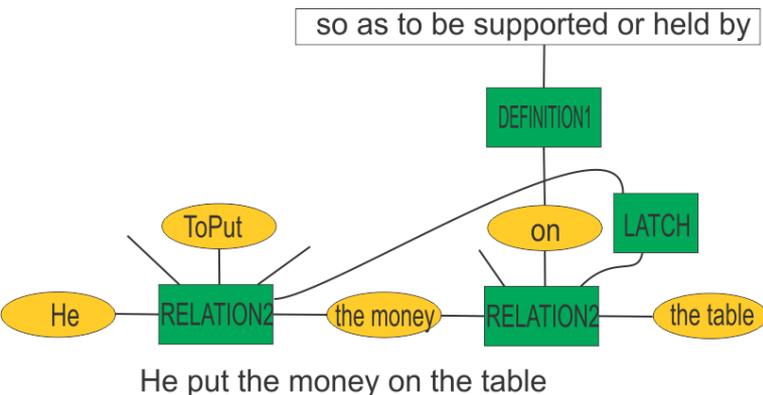
Or you buy it, and hope everything has been done properly.

The law gets changed a bit – cycle through the above.

Sounds reasonable, until you see the legalese.

The Proposed Method

Have a machine read the legal text, build a structure that accurately represents the text and the things implied by it, then use the structure to run the monitoring process. The complex definitions in the law are realised in the structure – everything is identifiable and traceable.

The banker can understand what it says by reading the text, without it having been through multiple stages in different languages – the law, the program specification, and the programming language.

so as to be supported or held by

DEFINITION1

ToPut   on   LATCH

He   RELATION2   the money   RELATION2   the table

He put the money on the table

Yuck

(7)If:

- (a) an institution is in the funds transfer chain; and
- (b) either:
- (i) the institution is an interposed institution and the transfer instruction is passed on to the institution at or through a permanent establishment of the institution in Australia; or
- (ii) the institution is an interposed institution and the transfer instruction is to be passed on by the institution at or through a permanent establishment of the institution in Australia; and
- (c) either:
- (i) the transfer instruction is accepted by the ordering institution at or through a permanent establishment of the ordering institution in Australia; or
- (ii) the making available by the beneficiary institution of the transferred money would take place at or through a permanent establishment of the beneficiary institution in Australia; and
- (d) some or all of the required transfer information was passed on to the institution by another institution in the funds transfer chain;
- then:
- (e) if the transfer instruction was accepted by the ordering institution at or through a permanent establishment of the ordering institution in a foreign country—before passing on the transfer instruction to another institution in the chain, the interposed institution must ensure that the instruction includes the tracing information; or

Some Examples

Section 95 of the AML/CTF Act provides that a financial institution must not enter into a correspondent banking relationship `reckless` as to whether the other institution is a `shell bank` or has a correspondent banking relationship with a shell bank.

Reckless

OED Definition: (of a person or their actions) without thinking or caring about the consequences of an action – the definition is held in the structure, along with all the definitions of all the words used in the definition

Shell Bank

Guidance Note

– Section 15 of the AML/CTF Act defines 'shell bank' as a corporation that:

- is incorporated in a foreign country; and
- Is authorised to carry on banking business in that country; and …

All words and specific groups of words have definitions (built structures), which come from a glossary, support notes, or a dictionary, and may include activity

What's The Catch?

No, it is not going to be your production system, but it is going to be very good at looking for trouble.

Its ease of understanding, and the ease of narrowing and deepening the focus, should make it an indispensable tool in high level analysis and control.

We mean no offence, but people hate tedium, and yet tedium is what it takes to find

"bad stuff"

What applications do you see for a tireless text-driven tool capable of abstract analysis – anything that can be said with words?

Lane following is a good example of intelligence – the ability to rewire internal structures at will

The approach is exactly the opposite of using data or statistics – reinforcing what you have always done is a good way to get stranded

What we are suggesting is that the bank build a model of itself (actually, lots of models) in that well-known modelling language – English
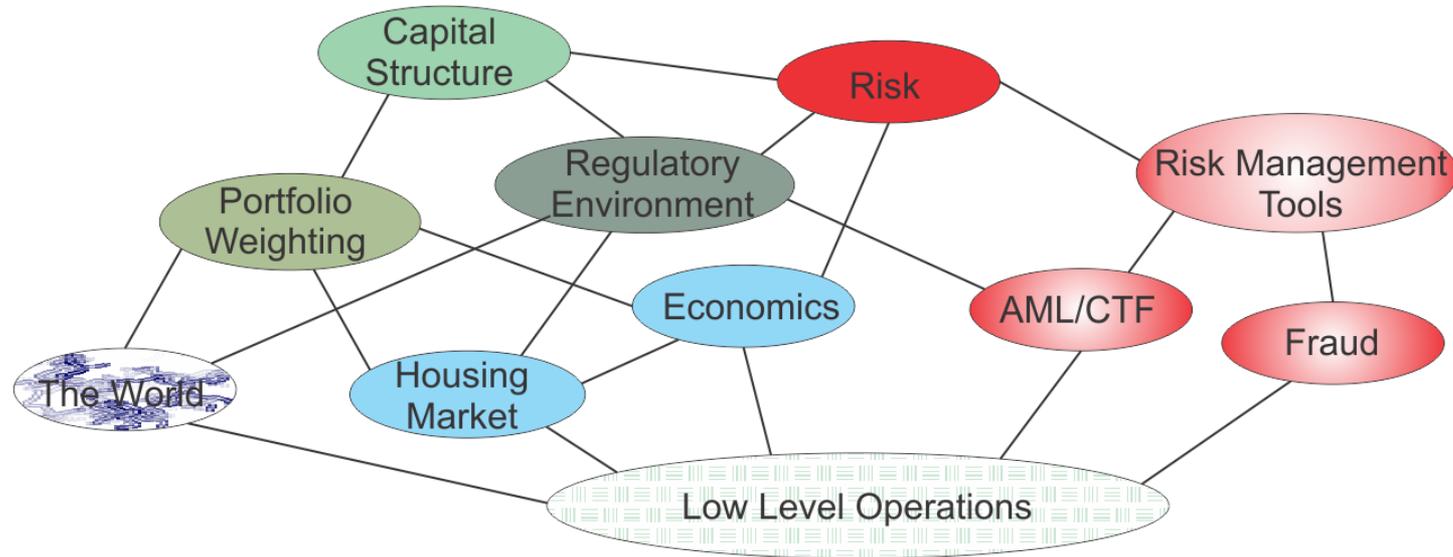
The beauty of using English is that all the models can talk to each other, they can be easily changed (and they don't suffer from the four pieces limit)
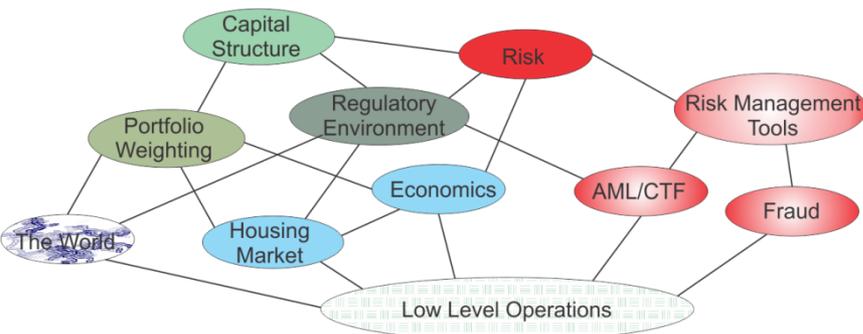
"Unprecedented"

Let's face it – all your models (including your mental models) are of little use in an era of free money and galloping house prices
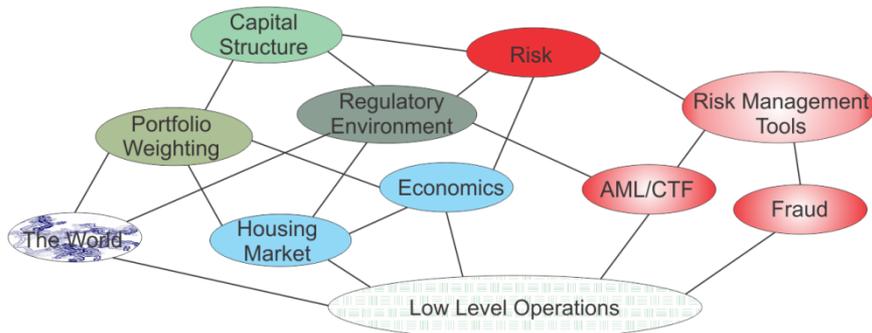
There are complex messages being passed between people with different unconscious knowledge
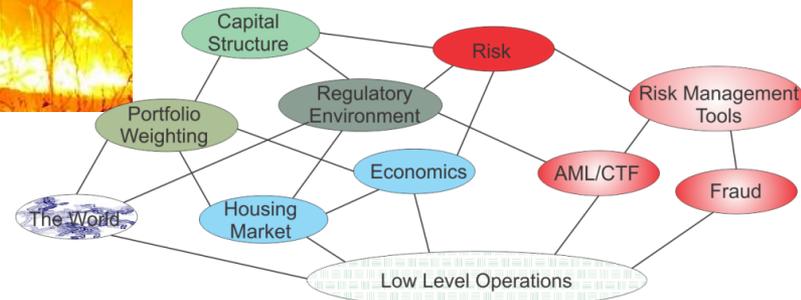
We can help with that

– we represent what is implied as well

A Bit of a Theme

We are interested in applications that require intelligence – involving "unprecedented" change and unpredictability – the sort of thing that AI doesn't do

Does Active Structure® presage a new, much more high level, wave of automation?

Yes, and whether you adopt it or not, its ramifications need to be thought about.

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