

# Redesigning the Contract Lawyer

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- 4. Boilerplate clause that could impact interpretation**
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# Introduction

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- ❑ **Hype around smart contracts**
- ❑ **Not a contract nor are they smart**
- ❑ **Transaction event monitoring code.**
- ❑ **The DAO debacle in 2016**
- ❑ **Code is not law**
- ❑ **Hard Fork**

# Traditional Contract Drafting

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## □ Traditional Drafting rules

□ Who,

□ What,

□ When;

□ Where;

□ How

## □ Example of this style:

*The Lessee must pay the Rent to the Landlord by no later than the 15<sup>th</sup> day of each month in clear funds into the Designated Bank Account.*

# Traditional Contract Drafting

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- All contracts follow a standard approach in setting out obligations.
  - Absolute Statements;
  - Logic Statements
- An example of this is:
  - a) *The contractor must attend the Principal's offices on a daily basis during business hours to provide the Service.*
  - b) *Whilst the Contractor is located at Principal's offices the Contractor must follow all reasonable legal instructions issued by the Principal's representative.*
- Clause (a) is an absolute statement whereas clause (b) is a logical statement.

# Traditional Contract Drafting

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- The structure of all contracts follow the same structure of all computer programs:
  - Absolute statements
    - Declaring a variable;
    - Initialising as variable;
  - Logical statements
    - If .. Then.. Else statements;
    - While statements;
    - Case statements.
- But how would a computer deal with statements such as:

*Reasonable legal instructions*
- The term “**reasonable**” at first sight appears to be immensely vague and thus uncertain.

## Traditional Contract Drafting

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- ❑ The law interprets this vague terminology by applying the Reasonable person test.
- ❑ That is: How would a reasonable disassociated/independent person regard the instruction.
- ❑ The reasonable person test is an objective test that is theoretically applied by an independent reasonable person of the general public.
- ❑ Note that the test does away with any bias since it is an object test and subjective aspects of the decision making are removed.
- ❑ But note this is a post interpretive test. It is only applied after the contract has been formed and set against the actions of the parties.



# Traditional Contract Drafting

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## □ Another example is:

*The Lessee must within a **reasonable time** after being notified by the Landlord that the Lessee is in default of the terms of the Lease rectify such notified default.*

□ *The issue with this clause is how would a computer interpret a “reasonable time” for rectifying any default.*

# Traditional Contract Drafting

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- ❑ *Lawyers will generally draft clauses like this as they will not really know at the time of entering into the contract all of the possible default actions.*
- ❑ *For example a non payment can be corrected in a very short period of time whereas a building fault may take time to correct as it could rely upon the availability of an external worker.*

# Deterministic vs Non-Deterministic Language

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- A **deterministic algorithm**, given particular input, will always produce the same output ensuring the computer goes through the same processing states to reach a result.
- In the case of a **non-deterministic algorithm**, for the same input, the algorithm may produce different output on different runs.
- Computers in general do not like non-deterministic logic.
- Same input should produce same output.
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# Some Boilerplate Clauses that could Impact Interpretation

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□ Tradition contracts should be self contained but this will not be the case for contracts that are converted into smart legal contracts.

□ Flow on affect to drafting:

□ Entire Agreement Clause

*This agreement comprises the terms and conditions detailed in the document and also incorporates the operations of the Smart Legal Contract. If there is a discrepancy between the terms and conditions of this document and the operations of the Smart Legal Contract, then **the terms and conditions of the document /Smart Legal Contract** will have precedence to the extent of the inconsistency.*

□ The parties should delete which ever has not been agreed; though it is suggested that the natural language version should take precedence.

# Some Boilerplate Clauses that could Impact Interpretation

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## □ Governing Law

The Smart Legal Contract code could be distributed and captured at each of the nodes involved in the relevant blockchain. The various nodes may reside across multiple jurisdictions. Consequently, a governing law clause is imperative.

## □ Conflict in Language

What is to occur if there is a conflict between the natural language version of the contract and the Smart Legal Contract code. It is recommended that the natural language version should have a precedence clause. This will assist the court if such a situation arises, as a court is expected to determine which version has precedence. This has been covered above in the entire agreements clause.

# Some Boilerplate Clauses that could Impact Interpretation

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## ☐ Variations

The traditional natural language version should set out the procedure if the parties need to vary the Smart Legal Contract code. This should include how a kill switch may need to be activated and a good faith clause to only change the obligations to the extent of the agreed variation that matches the original intent of the arrangement.

## ☐ Resolutions of Disputes

The parties may want to agree up front that if there is a dispute then the court can and should be encouraged to call upon a friend of the court to assist the judge in interpreting the Smart Legal Contract code. Traditionally this has been recognised as an *amicus curiae*

# Some Boilerplate Clauses that could Impact Interpretation

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## □ Oracles

The parties may wish address the issue of the role of oracles and under what circumstance the information provided by an Oracle will impact the operations of the Smart Legal Contract code.

- The drafter should ensure that the parties understand who the accepted oracles are, and how they may impact performance.
- If the oracle determines that a force majeure event has occurred, then the operations of the Smart Legal Contract can be suspended pending reactivation by the parties. This will involve a good faith and cooperation clause to restart the Smart Legal Contract code.

# Pseudo-code a new skill for lawyers

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- There are very few lawyers who would have sufficient skills to draft a natural language contract incorporating deterministic language and then converting the terms of the contract into executable Smart Legal Contract code.
- It is suggested that an intermediate step now be incorporated.



# Pseudo-code a new skill for lawyers

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- That step being the production of pseudo-code that will correspond to terms detailed in the natural language contract. The benefit of this intermediate step is that it will create a feed-back loop on the lawyers thought process which should identify any faults in the logic of the contract.
- It should result in tighter contractual obligations and thus be a more efficient process especially from a contract management perspective.

# Pseudo-code a new skill for lawyers

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- Pseudo-code is an informal way to express the design of a computer program or algorithm.
- In computer science an algorithm is a well-defined finite set of rules that specifies a series of elementary operations to be applied to some data known as the input so as to produce in a finite time some output.

# Pseudo-code a new skill for lawyers

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- The aim of pseudo-code is to develop a document that expresses the solution being sought at a high level which can be used by a software coder to develop a detailed program which will become the Smart Legal Contract.
- Pseudocode often uses structural conventions of a normal programming language but is intended for human reading rather than machine reading.

# Pseudo-code a new skill for lawyers

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□ Donald Knuth: “Fundamental Algorithm” Pseudo-code on how to read his Tome:

1. “Begin reading this procedure, unless you have already begun to read it. *Continue to follow the steps Faithfully.* ...
2. Read the Notes on the Exercises on pages xv-xvii.
3. Set N equal to 1.
4. Begin reading Chapter N. Do not read the quotations that appear at the beginning of the Chapter.
5. Is the subject of the chapter interesting to you? If so, go to step 7; if not go to step 6.
6. Is  $N \leq 2$ ? If not, go to step 16; if so, scan through the chapter anyway.
7. Begin reading the next section of the chapter; if you have already reached the end of the chapter, however, go to step 16. ...
16. Increase N by one, If N= 3 ,5, 7, 9, 11, or 12 begin the next volume of this set of books”.

# Conclusion

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- The training of the next generation of contract lawyers should include the upskilling these lawyers to understand the difference between deterministic language and non-deterministic language.
- Lawyers need to understand the impact of Smart Legal Contracts of their traditional contracts and as such special boiler-plate clauses should be considered.
- Some lawyers should be provided with sufficient skills to develop pseudo-code which can be utilised by a skilled Smart Legal Contract coder to develop a corresponding Smart Legal Contract which can be deployed on a blockchain.

# Redesigning the Contract Lawyer

## QUESTIONS

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