What every in-house lawyer should know about Smart(er) Contracts, Cryptoassets and Digital Disputes

SCL In-house Lawyers’ Group
10 November 2021
Agenda

13:00   Welcome
13:05   LawtechUK and its work programme
13:10   UK Jurisdiction Taskforce’s Legal Statement on Cryptoassets and Smart Contracts & Digital Dispute Resolution Rules
13:25   Law Commission’s smart contracts, electronic trade documents and digital assets projects
13:40   LawtechUK’s Smarter Contracts project
13:45   Q&A
14:00   End
Speakers

Emma Dearnaley, LawtechUK

David Quest QC, 3 Verulam Buildings

Daniella Lupini, Law Commission
LawtechUK is a government-backed initiative supporting the transformation of the UK legal sector through technology

LawtechUK is a collaborative initiative between Tech Nation, the LawtechUK Panel and the Ministry of Justice.

Find out more about LawtechUK’s objectives and work programme on the LawtechUK Hub.
A space to learn and explore, the LawtechUK Hub provides open access to a library of resources, including:

- **Bitesize courses** designed to equip legal practitioners with a foundational understanding of the six core technologies shaping the future of law
  - Artificial intelligence
  - Automation
  - Cloud
  - Data and data science
  - Distributed ledger technology
  - Smart contracts
- **Insights, tools and authoritative guidance**
- **An interactive database** of lawtech startups and scaleups
- **Latest news** from LawtechUK and information about how to get involved with our work programme
The Y1 work programme has been about building foundations that have a practical impact and can be scaled.

**Digital transformation of the UK legal sector**

- **Objective**
  - Build lawtech awareness and understanding
  - Foster transformative innovation
  - Provide cross-sector leadership

- **Intended results**
  - Increased experimentation, innovation and growth
  - Greater confidence, legitimacy and investment
  - Enhanced cohesion, collaboration and urgency
  - Future-fit capability and approach
  - Better data, systems, networks

- **Work programme**
  - **Project 1:** Lawtech Sandbox Pilot
  - **Project 2:** LawtechUK Hub RemoteCourts.org
  - **Project 3:** UKJT
  - **Project 4:** SME Dispute Resolution Platform
**LawtechUK’s work programme is advancing innovation in law**

**BENEFIT OF SOCIETY + ECONOMY**

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<th>Project 1: Lawtech Sandbox Pilot</th>
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<td><strong>Successful Pilot</strong> to fast track transformative lawtech.</td>
<td>Community website with tech courses, interactive sector map and lawtech resources.</td>
<td>Legal Statement on cryptoassets and smart contracts, to provide legal certainty.</td>
<td>Feasibility study and proof of concept for an online dispute resolution platform, using tech to address the £23bn SME late payment debt.</td>
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<td>World’s first fast response forum of 12 regulators.</td>
<td>Website for the digital justice community, with 100+ countries contributing.</td>
<td>Digital Dispute Resolution Rules for rapid resolution of disputes involving on-chain relationships and smart contracts.</td>
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Purpose:

Global leading legal and court services

commercial focus

Objective:

Digital transformation of the UK legal sector

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Work programme:

- Project 1: Lawtech Sandbox
- Project 2: Seizing the data opportunity
- Project 3: Resources and information
- Project 4: Smarter contracts
Legal Statement on Cryptoassets and Smart Contracts
In November 2019, the UK Jurisdiction Taskforce of the LawtechUK Panel published its **Legal Statement on Cryptoassets and Smart Contracts**.

This landmark statement seeks to address legal uncertainty by recognising cryptoassets as tradeable property and smart contracts as enforceable agreements under English law.

By answering critical questions as to classification and characterisation, the statement aims to provide investors with increased confidence of their rights and a dependable foundation for the mainstream use of cryptoassets and smart contracts.

You can read the statement [here](#).
“In legal terms, cryptoassets and smart contracts undoubtedly represent the future. I hope that the Legal Statement will go a long way towards providing much needed market confidence, legal certainty and predictability in areas that are of great importance to the technological and legal communities and to the global financial services industry. There is no doubt that some of the matters covered by the Legal Statement will, in the future, be the subject of judicial decision. But my hope is that, in the meantime, the Legal Statement will provide a foundation for the responsible future utilisation of cryptoassets and smart contracts.”

Master of the Rolls, Sir Geoffrey Vos, chair of the UK Jurisdiction Taskforce and LawtechUK Panel member

- 30m press reach of Legal Statement
- 2200+ downloads
- Referenced in 4 global legal judgements (so far)
- Quoted in multiple jurisdictions
Digital Dispute Resolution Rules
Published in April 2021, the Digital Dispute Resolution Rules (DDRR) aim to facilitate the rapid and cost-effective resolution of commercial disputes, particularly those involving novel technologies such as cryptoassets, cryptocurrency, smart contracts, distributed ledger technology and fintech applications (although the DDRR are also of wider applicability).

These rules may be incorporated into a contract, digital asset or digital asset system, and are groundbreaking in allowing for:

- arbitral or expert dispute resolution in very short periods
- arbitrators to implement decisions directly on-chain using a private key,
- optional anonymity of the parties.

The DDRR have been drafted to provide maximum flexibility to adapt to as yet undeveloped technologies, and to reach a resolution to disputes quickly and efficiently by arbitrators with appropriate technical expertise.

The DDRR also enable on-chain determination and implementation of decisions.

The DDRR are available for download here.
“I am delighted to welcome the publication by the UK Jurisdiction Taskforce of the ground-breaking Digital Dispute Resolution Rules. International business is rapidly adopting the use of digital documentation and on-chain smart contracts. The Rules aim to provide a process for speedy and cost-effective resolution of disputes originating digitally. They will hopefully give global businesses greater confidence to adopt and utilise new digital technologies.”

Master of the Rolls, Sir Geoffrey Vos, chair of the UK Jurisdiction Taskforce and LawtechUK Panel member

“We intend to incorporate the Rules into our dispute resolution ecosystem because they provide for specialised arbitrators and a specialised arbitration procedure, with the possibility of on-chain enforcement of an arbitrated outcome. We are grateful to the UKJT for engaging with the tech and business community to facilitate affordable access to justice and enable vital commerce.”

Vinay Gupta
CEO, Mattereum
MATTEREUM
Law Commission’s smart contracts, electronic trade documents and digital assets projects

10 November 2021
Overview

• Introduction to the Law Commission
• Introduction to the smart contracts project
• Analysis and selected areas of interest
• Our key findings
• Future work
• Next steps
• Our work on electronic trade documents
• Our work on digital assets
• Questions and answers
What is the Law Commission?

• A statutory law reform body at arm’s length from Government.
• We are not part of Government, but commissioned by it.
• Consultation is at the heart of our process.
What is the smart contracts project?

• The Ministry of Justice asked us to analyse current contract law of England and Wales as it applies to smart legal contracts.

• We consider whether current legal principles can apply to smart legal contracts in the same way as they do to traditional contracts.

• We also highlight any uncertainties or gaps, and identify any further work required.

• The project intends to build on the foundations laid by the UKJT Legal Statement, and considers concerns raised by stakeholders.
What is a smart legal contract?

• A legally binding contract in which some or all of the contractual obligations are defined in and/or performed automatically by a computer program.

• Depending on the degree of automation, smart legal contracts may require different or novel legal responses.

• We consider three main forms of smart legal contract:
  – Natural language contract with automated performance by code
  – Hybrid contract
  – Solely code contract
Our analysis focuses on six broad issues as they relate to smart legal contracts, and identifies potential areas of uncertainty:

• formation and enforceability, including in relation to deeds;
• interpretation;
• remedies;
• vitiating factors (mistake, misrepresentation, duress and undue influence);
• consumer protection; and
• jurisdiction.
Contract formation

• Agreement:
  – If parties enter into a transaction by deploying and interacting with code, without engaging in natural language communications, can their conduct amount to an agreement?
  – If parties deploy computer programs and those programs subsequently interact and perform transactions, can the operation of those programs amount to an agreement?

• Intention to create legal relations:
  – If parties enter into a smart legal contract on a DLT system or smart contract platform without any prior natural language communications, can there be an intention to create legal relations?
• “In writing” requirements. Can code satisfy them?
  – It depends on the type of code: source code, machine code, and other levels of code.
  – Schedule 1 to the Interpretation Act 1978 defines writing broadly as including “other modes of representing or reproducing words in a visible form”.
  – Parliament’s intention in introducing particular statutory writing requirements is relevant.

• Signature requirements:
  – We noted in our 2019 report on the Electronic Execution of Documents that a wide variety of handwritten and electronic signatures have been accepted as constituting valid signatures.
  – What matters is not the form, but whether a signature was applied in a manner which indicated the parties’ intention to authenticate the document.
  – Can digitally signed solely code smart legal contracts satisfy a signature requirement? We think so.
Interpretation

• Principles of interpretation have been developed in the context of natural language terms.

• Disputes can arise as to the “meaning” of coded terms. Computers do not interpret, but merely execute coded instructions. Are the legal principles of interpretation redundant in this context?

• We think that coded terms can (and should) be susceptible to contractual interpretation.

• We propose that the interpretation of a coded term should be determined by a “reasonable coder” test.
• Practical difficulties with certain remedies due to the nature of smart contract technology:
  – **Rectification**: no single entity may have the power to amend the code
    • The extent of any practical difficulties in rectifying coded terms will likely depend on the technical specifications of the particular smart contract platform, such as whether it has built in functionality to amend the code.
  – **Rescission**: blockchain transactions recorded immutably cannot be unwound
    • Achieving the practical effects of rescission will require a workaround of sort, such as ordering the parties to enter into an “equal and opposite” second transaction on the blockchain.
  – **Termination**: parties may not have the ability to terminate performance of the code.
    • A need to be able to stop or halt performance of the code by activating “kill-switches” should be considered.
• Unilateral mistake:
  – Where the coded terms are offered and accepted by computer programs, it may be difficult to apply the traditional test of unilateral mistake.
  – In *Quoine Pte Ltd v B2C2 Ltd* [2020] SGCA(I) 02, the Singapore Court of Appeal adapted the principles of unilateral mistake to accommodate trading contracts concluded by the parties’ computer programs.
Our key findings

• Some types of smart legal contracts (particularly solely code smart legal contracts) may give rise to novel legal issues.

• Existing legal principles can accommodate smart legal contracts, albeit with an incremental and principled development of the common law in specific contexts.

• The flexibility of our common law means that England and Wales provides an ideal platform for business and innovation, without the need for statutory law reform.
Our key findings

• The market has an opportunity to anticipate and cater for potential uncertainties in the legal treatment of their smart legal contract by including contractual terms aimed at addressing those uncertainties.

• Some issues which parties may wish to address directly in their smart legal contract include:
  – The relationship between coded and natural language elements.
  – Interpretation of contractual terms contained in code.
  – Impact of malfunctioning oracles and bugs in code.
  – The role of non-executable, natural language comments in the code.
Future work required

• We have identified two specific areas in which further work is required.

• Deeds:
  – We do not consider that parties can be confident that the current law supports the creation of deeds which are wholly or partly defined by code. Deeds require a high degree of formality, with strict requirements of witnessing, attestation and delivery. It is unclear if smart contract technology can accommodate these requirements.

• Private international law
  – Smart legal contracts are likely to give rise to uncertainty about their place of formation, their place of performance, and the jurisdiction to which they have the closest connection. This may cause difficulties in determining the application of existing common law rules of jurisdiction to matters involving smart legal contracts.

• We are discussing possible future work in these areas.
Next steps

- Publish the final paper with our detailed analysis in November 2021.

- We hope that further work in this area, particularly on the market front, can be led by the UKJT and LawtechUK.

- For updates on the project, write to us at: smartcontracts@lawcommission.gov.uk
Our work on electronic trade documents

- The UK Government has asked us to make recommendations to remove the legal blocker to the digitisation of trade documents. This is the first phase of a larger project looking at digital assets more generally. Government will decide whether to implement our recommendations.

- The law does not currently recognise the possibility of possessing something which is not tangible. Digital documents are not considered tangible, and cannot trigger the consequences of possession that their paper counterparts can.

- We are producing draft legislation which will:
  - Change the law so that certain electronic forms of trade documents can be possessed.
  - Retain existing English law in all other respects, so that existing legal principles apply equally to paper and electronic trade documents.

- Our remit is the law of England and Wales, but we are conscious of international developments.

Our current views are provisional. We are presently analysing consultee responses in preparation for our final report, to be issued in the first half of next year.

For updates on this project, write to us on: digitalassets@lawcommission.gov.uk
Our work on digital assets

• We are looking to recognise and protect property rights in relation to certain digital assets, and we will be considering what legal reform is necessary to achieve that.

• Our approach is principles-based to ensure room for new assets based on evolving technology to benefit from that recognition and protection.

• We are considering whether a “third category” of personal property would best achieve this effect.

• Many digital assets may be different from, and work differently to, existing types of property. However, there is no reason why English law cannot accommodate this, and may benefit from bespoke rules applying to such types of property.

• We are working with international bodies to ensure our reforms are consistent with international developments.

We are currently preparing a consultation paper to be published in mid 2022.

For updates on the project, write to us on: digitalassets@lawcommission.gov.uk
LawtechUK’s Smarter Contracts project
Objective: increase awareness and adoption of digital and smart contracts

**Purpose**

- Critical investment for the legal sector, business community and the UK economy longer term
- UK global leadership in smart contracts - risk of losing ground
- The market lacks a persuasive case on the benefits and opportunities
- Needs coordinated effort across a range of stakeholders
- Build on the work of the UKJT, Law Commission and sector initiatives

**Strategy**

- Initial discovery and planning phase to scope the market
- Dynamic to market needs
- Close collaboration with stakeholders
- Focus on awareness/education and bringing the sector together around use cases
- Project to be completed by February 2022

**Why LawtechUK?**

- Neutral leadership
- Government backed
- Core purpose
- Size of opportunity
Industry developments and practical applications
Industry and expert roundtable on 5 August

- c.35 attendees
- We discussed barriers, benefits, opportunities and what the future likely holds - as well as LawtechUK’s ideas for how to increase awareness and practical applications of digital contracts and smart legal contracts.
- Key takeaways:
  - Terminology not the focus
  - Just contracts
  - Infrastructure is critical
  - Machine-readable contracts are the future
  - The ‘why’ is missing
  - Practical use cases would be most helpful
- Building practical use cases received a high level of support during the roundtable, with 95% of the attendees believing that this would help to demonstrate the benefits and drive practical applications.

The slides presented, including the full poll results, can be downloaded here.

A detailed readout capturing the key discussion points and contributions in addition to the presented material can be found here.
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<th>Rank</th>
<th>Description</th>
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<tr>
<td>1.</td>
<td>Building practical use cases</td>
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<td>2.</td>
<td>Digital and smart contracts drafting guide, aligned with Law Commission</td>
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<td>3.</td>
<td>Industry-specific toolkits</td>
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<td>4.</td>
<td>UK digital and smart contracts roadmap with recommendations</td>
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<td>5.</td>
<td>Practical/interactive learning content on the LawtechUK Hub</td>
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<td>6.</td>
<td>Research and mapping</td>
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<td>7.</td>
<td>Digital and smart contracts sandbox with regulator input</td>
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<td>8.</td>
<td>Digital Disputes Resolution Rules training / awareness raising</td>
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<td>9.</td>
<td>Hackathon, ideathon, demo day, showcase</td>
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<td>10.</td>
<td>Guidance on other forms of on-chain dispute resolution</td>
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Which of the statements are likely to happen?

- Machine-readable documents will be of more significance than self-executing contracts (60%)
- International infrastructure and standards will be developed over the next 10 years (45%)
- Majority of legal documents produced in machine-readable as well as human-readable form by 2030 (40%)
- UK jurisdiction will be a global leader for digital and smart contracts in 2025 (35%)
- Smart contracts used only in specific industries such as cryptocurrency platforms and insurance sector (30%)
- UK jurisdiction is a global leader for digital and smart contracts now (25%)
- Too early to say / don't yet know (20%)
- Trillions of smart legal contracts entered into annually by 2030 (10%)
- Smart contracts are over-hyped and unlikely to provide the benefits claimed or to be used widely (10%)
- Trillions of smart legal contracts entered into annually by 2025 (0%)
Smarter Contracts - use cases

- LawtechUK is working with collaborators across disciplines and sectors to put together a portfolio of use cases to showcase on the LawtechUK Hub.

- Focus: communicating the benefits over traditional ways of contracting, demonstrating what technology enables in the real-world and in the near term.

- ‘Smarter contracts’ for the purposes of this project means contracts that are in digital form (machine-readable as well as human-readable) and to some degree smarter and more useful than conventional contracts. We are looking across the whole spectrum of digital contracts, including (but far from only) contracts that include executable logic so as to make it a ‘smart legal contract’ or ‘smart contract’ as a subset of digital contracts.

- Publication and event in February 2022, bringing together collaborators and the wider community.

- Read LawtechUK’s blog post ‘Smarter Contracts’ here.

Thoughts to share? Ideas for a use case? Interested in coming to the Smarter Contracts event? Contact us and sign up for updates here.
Q&A