Artificial Intelligence Driven Online Dispute Resolution and Digital Security

Submitted by: eBridgeChina Research Institute
AI Driven Online Dispute Resolution and Digital Security

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We move Closer to AI,,,

Sofie is first ever Robot that was granted Saudi Arab citizenship and can chat with nature language with anyone at anytime for any topic.
What Sofie can do:

- Learning vast amount of information
- Review vast amount of question/answers;
- Build her own logical and rational mechanism;
- Empirical assessment;
- Case and Judgment Comparison
- World wide law and regulation checkup
- Rating of best settlements considering all costs;
- Prediction of best scenario resolution
Dispute Resolution Evolution

- Dispute resolution online;
- Computer-aided resolution;
- Computer-aided mediation;
- AI Dispute risk alerting;
- Online credit system of resolution enforcement;
- Online Dispute Resolution
Contents

Dispute Resolution GOES ONLINE and Digital

AI-Enabled ODR

AI ODR Evolution

Digital Security and Trust Enabler
Dispute Resolution: ONLINE and Digital

Why and How?

- eCommerce makes disputes across economies.
- eCommerce creates massive micro-disputes.
- Mediation time is more important than result.
- Computers beat human in knowledge based approach.
- AI + ODR is the trend.
Dispute Resolution: ONLINE and Digital and Technologies

**Workflow Control**

- Submit a Dispute
- Case Distribution
- Online notary service

**Instant AI Mediation**

- AI technology will generate an instant resolution.

**Multilingual Chat rooms**

- Mediator and the dispute parties conduct online dispute resolution with AI technology.

**Rating & Execution**

- Rate the mediation service;
- Permanent record of parties who fail to honor the resolution contract.

Through email, text message, and voices in case by case or batch mode using cloud services.

- Assign the dispute to relevant mediation partners according to the selection criteria with Big data analysis.

Dispute parties can sign the resolution online with smart contract and **blockchain technology**.

END TO END DIGITAL
Contents

- Dispute Resolution GOES ONLINE and Digital
- AI-Enabled ODR
- AI ODR Evolution
- Digital Security and Trust Enabler
AI Driven ODR

- Whether the introduction of AI will replace a lawyer, arbitrator?

- How is mediation of AI participation different from human operations?

- Why introduce AI in dispute mediation, especially cross-border e-commerce online dispute resolution?

- Machine learning or deep learning will equip AI mediation with more knowledge, data and past resolutions, it can easily overtake the para-legal function.

- Neural network may provide better reasoning or negotiation strategy during the process. As of now, it is lack of passion and humanity.

- AI Driven ODR is necessary for consumer disputes in eCommerce, particularly in cross-border eCommerce.
Relevant AI Systems

- decision support systems
- rule-based systems
- expert systems
- multi-agent systems
- knowledge-based systems
- case-based reasoning
- intelligent interfaces
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**Mediation Tools: Diversified Tool-Set, Multi-Prong Attack**

- **Group call**: Mediate dispute via group call, meanwhile, all parties are online
- **Delivery**: Multi-channel electronic notifications
- **Mediation via video chat**: All parties appear via video chat, face to face, back to back, to mediate dispute
- **Online record confirmation**: Customer confirms record online; supports dual security identification
- **Online mediation**: All parties express their viewpoints online, uploading evidence, mediator guides all parties on the same page
- **online-generated mediation**: According to different kinds of contract templates, online-generated mediation protocol
- **Mediation knowledge, skills, judgements online, regulations, empower mediator**: Mediation knowledge, skills, judgements online, regulations, empower mediator
- **Case and assessment**: According to dispute case content, recommends customer affiliated cases, online assessment, offers anticipates outcome to parties involved
- **Figure & Feature**: Aimed different figures, information gathering, uniform analysis, assists mediator to formulate different solutions
ODR: Challenge to AI

- Current AI
  - Best solution;
  - Controlling a rule based system
  - Focus on next best move
  - History data are important
  - AI: Artificial Intelligence

- AI for ODR
  - No best solution
  - Controlling human reaction
  - Process is as important as the next resolution
  - History data are important?
  - AI: Artificial Intuition
Dispute Resolution GOES ONLINE and Digital

AI-Enabled ODR

AI ODR Evolution

Digital Security and Trust Enabler
Definition of AI ODR

- **Definition**
  - Adoption of AI technology in the ODR process

- **AI ODR is not**
  - Computer aided ODR
  - Intelligent ODR
  - ODR with adoption of BI and Big data analytical tools
  - More
AI Mediation: Smart to Intelligent

Level 1: AI resolution generator

Level 2: AI aided mediation

Level 3: AI assisted mediator

Level 4: AI Mediator
Contents

- Dispute Resolution GOES ONLINE and Digital
- AI-Enabled ODR
- Case Distributions & Information Services
- Digital Security and trust enabler
Possible Risks of AI Mediation

- Privacy infringement
  - Sensitive data leak;
  - Unauthorized access to the database;
- Virus intrusion
  - Unauthorized internet intrusion;
  - Virus attack via internet connection;
  - Data interception via internet
- System risk
  - System availability;
  - Malfunction and unethical algorithm
Digital Security in AI ODR

Definition
All security concerns because of the introduction of digital systems to the ODR process

Scope
Internet security: risk by the interconnection to the public network;
System security: risk of malfunction or improper operation of digital system;
Algorithm security: risk of algorithm ethic principle;
Operator security: risk of operator qualification or honesty;
Trust security: risk of credible data communication to other digital systems or data generation units.
Other risks from the adoption of digital system.
System Security and Trackability

- Time-Stamped security assurance: mediation process with time-stamped security, every case is unassailable

- Any misconduct will be recorded and traceable permanently

- All the documents should be immutable that makes records tamper proof

- Exceeding efficiency, simple and direct steps to get data registered
Data Security and Trustworthy

1. Irrefutable digital evidence permanently recorded with timestamp
2. Forensic audibility allows users to trace action and data back to the source with transparency and accuracy
3. Ultimate confidentiality with encrypted technology, restricted access
4. Data is secured by the most powerful and secure network
Management of Digital Security

Digital Security

Guaranteed trust without third party control

Undeniable data

Transparency

Time-stamped documentation

Smart contract

Operation Audit

Immutability
Trend of AI+ODR

1. Current state of ODR is ADR online;

2. Future ODR is AI mediated online dispute resolution;

3. Mediators will train their own AI mediation units to stay in business. Algorithm is the winner; Sofie is the competitor.

4. Success of AI ODR is based on the management of digital Security.
Technology Infrastructure for AI-ODR.

1. Technology for the management of digital security.
2. Deep learning for training AI to evolve;
3. Big Data for analytic advisory;
4. Social Credit System for enforcement.
Thanks!

Please feel free to reach out with any questions!