

Intelligent Document Cognition System, Automatic Document Summary and Compliance Checking

Keywords:

- Artificial Intelligence (AI), Natural Language Processing (NLP), Named Entity Recognition (NER), Relation Extraction, Event Detection, Text Summarization

Problems addressed

- The challenge of handling various kinds of complex formatted documents in the financial sector
- The need to understand, analyse and extract specific data information for the purpose of regulatory compliance checking, report generation, and disclosure requirement, etc.
- The issue of existing process which is slow, error-prone and labor-intensive

ASTRI's Financial Document Analysis (FDA) system addresses these pain points, providing an intelligent information cognition system to automatically analyse and extract key information from the financial documents, and conduct summary generation and compliance checking.

Innovations

ASTRI's FDA system provides an end-to-end solution based on deep learning to enhance regulatory technology, reduce "Non-compliance costs" and "Manual checking processes", and improve the operational efficiency with artificial intelligence (AI).

The innovation outlines:

- **A deep natural language processing engine** to accurately extract entities, relationships, and event roles
- **Hybrid (table and text) data mining models** to conduct structure process of the richly formatted documents
- **A document level event extraction** to detect and extract the events scattered across the documents
- **A deep learning based end-to-end solution** to enhance Regulatory Technology

Key impact

- Reduce Non-compliance costs
- Reduce manpower cost of manual checking process
- Improve the operational efficiency
- Automate and streamline the whole regulatory compliance checking process

Innovation snapshot

PDF Labelled Document Summary Compliance Checking JSON

Event type

- Acquisition

Date

- 14 December 2018

Purchaser

- Tree Holdings Limited, a company incorporated in Cayman Islands with limited liability whose issued Shares are listed and traded

Vendor

- Perfect Bright Management Company Limited, a company incorporated in the British Virgin Islands with limited liability

Agreement

- the sale and purchase agreement dated 14 December 2018 entered into among Tree Investment, the Seller and the Guarantor

Target

- Hong Kong Stalving International Co., Limited, a company incorporated in Hong Kong with limited liability which is owned as to 100% by Tree Investment

Consideration

- HK\$40 million

8. Considerations

- This transaction is a discretionary transaction.
- The offer is more than 5% or less than 5%.
- The offer is made in the document of Chapter 10.
- The document opened at the end of the document.

10. Compliance Checklist

• Issued more than 5%	
• Issued less than 5%	
• Completed document	
• Chapter 10	

9. Reason Checking

- Reasons checked
- Message: Reasons for entering into

10. Risk Value Checking

- Results not evaluated
- Message: Not Applicable

10. Risk Profit Checking

- Results checked
- Message: Results not related

10. Legible Declaration Checking

- Results checked
- Message: Legible declaration checking finished

10. Declaration Signed Checking

- Results not evaluated
- Message: Not Applicable

10. Other Party Checking



Demo Video

Project completed

- 2021

Applications

- Document Summary
- Report Generation
- Regulatory Compliance Checking
- Enterprise Knowledge Graph
- Information Consistency Checking

Patent(s)

- N/A

ASTRI Patent Search

Commercialisation opportunities

- IP licensing
- Technology co-development