

Artificial Intelligence and Blockchain Technologies in Online Dispute Resolution: A Solution to Consumer Disputes in South Africa?

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Abstract

With the growth of e-commerce transactions and people living their lives online, it is important for consumer disputes to be tailored in a manner that is suitable for consumers and their types of disputes. Currently South Africa is facing major delays in resolving consumer disputes, and consumers end up not pursuing their low-value claims as the current processes take a long time. Further, consumers do not have the funds to pay attorneys. The *Consumer Protection Act* 68 of 2008 (CPA) encourages the use of alternative dispute resolution (ADR) before a consumer dispute can be referred to a court of law. However, such ADR processes are lengthy and do not provide consumers with affordable and efficient relief. The current ADR processes do not meet the expectations of the consumers; thus, this paper proposes an integration of artificial intelligence (AI) and Blockchain Technologies in resolving consumer disputes via online dispute resolution (ODR). Various forms of AI and blockchain technologies are explored. The concept of ODR is introduced and current examples of ODR systems like eBay, and countries that have already moved to ODR with the integration of AI, are used as exemplary models for a South African ODR powered by AI and blockchain technologies.

Keywords

Alternative dispute resolution; artificial intelligence; blockchain technologies; consumer protection.

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1 Introduction

Consumer disputes require tailored mechanisms that provide consumers with access to remedies that do not impose significant costs and delays,¹ failing which, the realisation of consumer rights would remain merely a "lofty ideal" that does not lead to the improvement of a consumer's life. It was against this background that the *Consumer Protection Act* (CPA)² was enacted. The Act provides consumers with certain rights and dispute resolution mechanisms aimed at resolving disputes promptly. However, as will be discussed later, the mechanisms provided by the CPA are proving to be lengthy and difficult. Such a lengthy process ends up deterring consumers from seeking legal redress. Consumers do not want such lengthy and difficult procedures. They seek prompt restitution when they believe the goods or services they purchased are not satisfactory, most usually because they are not in accordance with their orders, or because delivery was late or failed.

This paper will examine the provisions of the CPA, with a specific focus on dispute resolution mechanisms and their shortcomings. Thereafter an alternative dispute resolution (ADR) mechanism using online dispute resolution (ODR), artificial intelligence (AI), and blockchain technologies will be explored. This paper will examine how such a mechanism can be applied in South Africa and what legislative changes are required.

2 *The CPA in general*

The CPA came into operation in 2009, when South African consumer laws were outdated and fragmented.³ There was a need for an updated, comprehensive consumer framework. The Act was enacted "to promote and advance the social and economic welfare of consumers in South Africa".⁴ The Act now provides an extensive framework for consumer protection and aims to develop, enhance and protect the rights of the consumer and to eliminate unethical suppliers and improper business practices.⁵

Previously there had been no specific "consumer protection law" in South Africa. There were, however, certain specific industry consumer laws that

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¹ OECD 2007 <https://legalinstruments.oecd.org/public/doc/185/185.en.pdf> 6.

² 68 of 2008.

³ Jacobs, Stoop and Van Niekerk 2010 *PELJ* 303.

⁴ Section 3(1) of the CPA.

⁵ Preamble of the CPA; Jacobs, Stoop and Van Niekerk 2010 *PELJ* 303.

protected certain industries, for example, the laws governing advertisements that consumers could use in a case of false advertisement and the law relating to the South African Bureau of Standards (SABS), which consumers could use for redress should any product they purchased not be in line with the SABS standards. Consumers normally would refer matters to court based on common law and they would usually base their claims on a lack of consent between the contracting consumer and supplier, and the sale of defective goods. The CPA codified the common law and other industry-specific consumer laws into one statute aimed at protecting consumers.⁶

In terms of section 3 of the CPA, one of the purposes of the Act is to protect vulnerable consumers. Section 3(2) of the Act places great responsibility on the Consumer Protection Commission, which must take all reasonable and practical steps to ensure the realisation of the Act.⁷

2.1 The scope of the CPA

The Act defines "consumer" as:

- (i) a person to whom goods or services are marketed in the ordinary course of the supplier's business; a person who has entered into a transaction with a supplier in the ordinary course of the supplier's business, unless the transaction is exempt from the application of this Act by section 5(2) or in terms of section 5(3); if the context so requires or permits, a user of those particular goods or a recipient or beneficiary of those particular services, irrespective of whether that user, recipient, or beneficiary was a party to a transaction concerning the supply of those particular goods or services; and a franchisee in terms of a franchise agreement, to the extent applicable in terms of section 5(6)(b) to (e).⁸

The Act further defines the word "person" to include a juristic person. This extends the scope of the CPA not only to people but to businesses as well. The effect of this is that a business that procures goods or services can make use of the CPA redress mechanisms.

Nowadays consumers have the advantage of procuring goods and/or services in multiple locations, including internationally. Sharrock⁹ is of the opinion that those transactions which occur in multiple locations (cross border) and those transactions where an agreement is concluded outside of South Africa, but where the goods or services are delivered in South Africa, would be regarded as having occurred in South Africa and the provisions of the CPA would apply.

⁶ Jacobs, Stoop and Van Niekerk 2010 *PELJ* 303.

⁷ Section 3(2) of the CPA.

⁸ Chapter 1, Part A – Interpretations of the CPA.

⁹ Sharrock *Business Transactions Law* 594.

2.2 Dispute resolution in terms of the CPA

As was mentioned earlier, the CPA provides consumers with rights, and chapter 3 of the CPA (sections 68-71) provides for the protection of consumer rights and the consumer's voice. This is done by providing consumers with processes to enforce their rights. Only a person with legal standing may make use of these processes.¹⁰ The Act provides that this may be done by:

- (a) referring the matter directly to the Tribunal, if such a direct referral is permitted by this Act in the case of a particular dispute;
- (b) referring the matter to the applicable ombud with jurisdiction, if the supplier is subject to the jurisdiction of any such ombud;
- (c) if the matter does not concern a supplier contemplated in paragraph (b)—
 - (i) referring the matter to the applicable industry ombud, accredited in terms of section 82(6), if the supplier is subject to any such ombud; or
 - (ii) applying to the consumer court of the province with jurisdiction over the matter, if there is such a consumer the court, subject to the law establishing or governing that consumer court;
 - (iii) referring the matter to another alternative dispute resolution agent contemplated in section 70;¹¹ or
 - (iv) filing a complaint with the Commission in accordance with section 71; or

¹⁰ Section 4.1 of the CPA lists the person who has locus standi. The Act provides as follows: "(1) Any of the following persons may, in the manner provided for in this Act, approach a court, the Tribunal, or the Commission alleging that a consumer's rights in terms of this Act have been infringed, impaired or threatened, or that prohibited conduct has occurred or is occurring: (a) A person acting on his or her own behalf; (b) an authorised person acting on behalf of another person who cannot act in his or her own name; (c) a person acting as a member of, or in the interest of, a group or class of affected persons; (d) a person acting in the public interest, with leave of the Tribunal or court, as the case may be; and (e) an association acting in the interest of its members."

¹¹ Section 70 of the CPA provides that a consumer may "seek to resolve any dispute in respect of a transaction or agreement with a supplier by referring the matter to an alternative dispute resolution agent who may be— (a) an ombud with jurisdiction, if the supplier is subject to the jurisdiction of any such ombud; (b) an industry ombud accredited in terms of section 82(6), if the supplier is subject to the jurisdiction of any such ombud; (c) a person or entity providing conciliation, mediation or arbitration services to assist in the resolution of consumer disputes, other than an ombud with jurisdiction, or an accredited industry ombud; or (d) applying to the consumer court of the province with jurisdiction over the matter, if there is such a consumer court, subject to the law establishing or 45 governing that consumer court."

- (d) approaching a court with jurisdiction over the matter, if all other remedies available to that person in terms of national legislation have been exhausted.¹²

These are provisions that are aimed at providing the consumers with avenues of redress should any of their rights as provided for in the CPA have been breached by the suppliers. The CPA does not create a specific hierarchy for which disputes may be resolved. Therefore, the Act should be read as a whole, and section 69 of the CPA should not be read in isolation. The Act provides that a consumer may not approach the court while an appeal for the review of an order made by the Tribunal is still pending;¹³ or where all other remedies afforded by the Act to the consumer have not been exhausted.¹⁴ Legal scholars have interpreted this to mean that the correct approach for the consumer to take is to approach the regulators first – to attempt to resolve the issues by way of alternative dispute resolution. Should that fail, the consumer may approach the consumer courts and provincial authorities, then the Commission, then the tribunal, and lastly the courts.¹⁵

The High Court addressed the issue of exhausting the remedies provided in the CPA in the 2016 case of *Joyroy 4440 CC t/a Ubuntu Procurement v Potgieter*.¹⁶ In that case the Court held that the meaning of section 69(d) is clear and unambiguous and that there is thus no need for statutory interpretation. The Court held as follows:

It is specifically stated that the consumer may approach the court *if* all the aforementioned avenues of redress have been exhausted. The legislature was very specific in prescribing the redress that a customer has in terms of this section.¹⁷

There are, however, different views concerning the issue of whether consumers must first approach the supplier before taking the redress steps previously outlined. Melville argues that the reading of section 69 does not indicate that the consumer is compelled to first approach the supplier before engaging in the abovementioned mechanisms.¹⁸

This viewpoint is supported by the author of this paper. Consumers should not be compelled to approach the supplier first before taking the redress steps. It is important to note that this does not mean that consumers should not contact the supplier at all. Rather, it suggests that consumers should

¹² Section 69 of the CPA.

¹³ Section 115(2) of the CPA.

¹⁴ Section 39(d) of the CPA.

¹⁵ Mupangavanhu 2012 *PELJ* 336; Van Heerden "Protection of Consumer's Rights" 69-2, para 3.

¹⁶ *Joyroy 4440 CC t/a Ubuntu Procurement v Potgieter* 2016 3 SA 465 (FB) (hereafter the *Joyroy* case).

¹⁷ *Joyroy* para 8.

¹⁸ Melville *Consumer Protection Act* 126.

have the flexibility to choose the most appropriate redress mechanism for their particular situation. This could involve seeking redress from the supplier or pursuing alternative dispute resolution mechanisms. However, suppliers have internal dispute resolution mechanisms, and sometimes it might be beneficial to the consumer to use those mechanisms first before trying the redress mechanisms provided for in the Act. An example of such a case where it might be beneficial is that of suppliers with internal redress mechanisms, like eBay, as will be discussed below. In certain instances, approaching the supplier first would prove futile, as some suppliers might not be cooperative and/or seek to delay the resolution of the matter until the consumer grows tired and abandons the claim. Ultimately the goal of consumer protection laws is to ensure that consumers have access to effective and efficient redress mechanisms, regardless of whether they choose to approach the supplier first or not.

2.3 The shortcomings of CPA

Magaqa, a scholar in the field of consumer protection, argues that the Commission, one of the redress agencies in terms of the CPA, has failed to protect consumers. He argues that there is a lack of clear processes, that the Commission is inaccessible to consumers, that it has a high workload and a low work output, that the Commission has differing interpretations of the CPA, and that it has a poor reputation owing to negative publicity.¹⁹

The redress process in terms of the CPA has been provided above. It is a long and tiresome process. Many consumers, most especially those trying to enforce their rights in disputes about small amounts, would rather leave it be than follow the dispute resolution process found in the CPA. An example to explain this would be consumer Z purchasing goods from supplier X in the amount of R200. Supplier X supplies Z with damaged goods, which is in clear contradiction to the CPA. Would it then be wise for Z to follow the resolution/ redress process found in the CPA for R200? It is likely that the consumer would abandon the claim from the beginning and resort to online complaints, which might not assist the consumer in any way. An example of this would be a South African online supplier – Takealot.com. On Hello Peter it has 18 390 reviews, 64% of which give it one star, with an average rating of 1.96. Most of the complaints are regarding defective goods and wrong orders.²⁰ If the consumers had an effective redress system they would be using it instead of resorting to naming and shaming. Consumers prefer quicker solutions to their issues and the CPA redress and enforcement procedure is the opposite of that.²¹ All consumers need to have access to the justice system. Du Plessis argues the importance of resolving

¹⁹ Magaqa 2015 *SA Merc LJ* 32.

²⁰ Hello Peter date unknown <https://www.hellopeter.com/take2takealot>.

²¹ OECD 2007 <https://legalinstruments.oecd.org/public/doc/185/185.en.pdf> 6.

consumer–supplier disputes regardless of the amount of controversy to maintain social order.²²

The other issue to consider is that even if the Act allowed the parties to approach the courts first without having exhausted the mechanisms provided in the Act, it would still be difficult for many people in South Africa, especially in cases involving small claims. The courts, including the small claims courts, are located far from the people, who would have to spend money on travel to reach the courts. And they might be required to return to the courts two or three times before the matter can be heard. The other issue for matters over R20 000, which is the statutory limitation of the small claim's courts, is that such matters would need to be referred to the magistrate's court or the high court if they fall under their jurisdiction. For such matters, consumers will require the services of attorneys and there are also delays involved before a matter can be heard in court. A member of parliament and chief whip of one of the opposition parties, Narend Singh, wrote as follows:

It is common knowledge that the South African justice system is already overburdened and under-resourced. This has resulted in a perpetual state of backlog. Cases are delayed and postponed as a result of overworked legal professionals, ineffective investigations, and corruption – all of which contribute to the infringement of constitutional protections ...²³

In addition, the court process is not efficient. The courts can be slow and costly, with cases often taking months or even years to resolve. This can be frustrating for consumers who need a quick resolution to their issues. Consumers need a redress mechanism that is fast and efficient, where consumers can have their claims addressed in a timely manner without having to bear significant expenses. They might lose interest in pursuing their claims as a result of the delays they experience and the funds they have to spend.²⁴

3 ODR in South Africa

South African consumers need a fast and efficient system to protect their rights as consumers. It is worth mentioning that the Act itself, the CPA, recognises that times are changing, and that it is thus necessary to develop and employ innovative means to protect the interests of all consumers by ensuring accessible, transparent, and efficient redress for consumers who are subjected to abuse or exploitation in the marketplace.²⁵ The Act goes on to say that the recent and emerging technological changes, trading

²² Du Plessis 2010 *SA Merc LJ* 518.

²³ Singh 2020 <https://www.dailymaverick.co.za/opinionista/2020-05-21-justice-delayed-is-justice-denied-we-must-speed-up-the-court-system-under-lockdown>.

²⁴ Naudé 2010 *SALJ* 527.

²⁵ Preamble of the CPA.

methods, patterns, and agreements have brought and will continue to bring new benefits, opportunities and challenges to the market for consumer goods and services in South Africa.²⁶ ODR offers the chance for consumers to resolve their disputes quickly and efficiently without having to travel to the courts and without having to spend money on legal fees.

ODR supplements and/or replaces the traditional methods of dispute resolution by making use of technologies and various dispute resolution methods. As technology evolves, so do the methods of ODR, which can take place in any of the following ways, for instance:

- a. Online video conferencing – In this case, a mediator or arbitrator and the parties make use of video conferencing technologies to conduct their dispute resolution process. This is widely used nowadays – not just in alternative dispute resolution, as the courts have also started using such technologies to conduct their hearings virtually.
- b. Artificial Intelligence-based dispute resolution, which will guide the one party to the dispute in formulating the issues and then send such formulations to the other party for comment or reply. Artificial Intelligence will assist the other party to formulate a response. The process can go back and forth until the parties reach an agreement. Alternatively, the AI programme assists the parties to reach a decision.
- c. Another form of artificial intelligence-based dispute resolution is one that will be discussed in detail in the following portions of this paper. It is a system of ODR in which the parties make submissions to an artificial intelligence-based dispute resolution system and the AI, through the use of algorithms and blockchain technologies, renders a quick decision regarding the dispute. The AI analyses the relevant court decisions and statutes and then applies those to the dispute at hand and renders a decision.

Schmitz highlights the reasons why an ODR system is the way forward by arguing that consumers do not want to waste time and money on phone calls or the like when another fair solution is available through ODR, which should entail a simple-to-access, free service to consumers, and an easy-to-understand system.²⁷

E-commerce has become more prevalent nowadays than traditional offline commerce. The world saw a surge in e-commerce transactions in 2020 due

²⁶ Preamble of the CPA.

²⁷ Schmitz 2018 *Journal of Internet Law* 7.

to the covid19 pandemic. This trend continued even after the number of positive covid cases decreased. This shows the trust consumers have in online shopping. The eCommerce net sales of the top 100 South African online stores accounted for about US\$909 million in 2020.²⁸ Consumers choose eCommerce over traditional methods of commerce for the following reasons:

- a. Trust – consumers have trust in the e-commerce system. They have trust that the supplier will fulfil his end of the agreement. Consumers also submit their credit card information online when making payments with the trust that the system will either store the information safely or erase the credit card information after the transaction.
- b. Comfort and efficiency – consumers rely on e-commerce because of its comfort. They could make purchases from the comfort of their homes and have the goods or services delivered to them, without any need for travel and spending money on transportation. E-commerce provides efficiency by allowing consumers to do everything online and allowing them to choose the delivery methods, and delivery period and allows consumers to search and select the service or product they want to procure without the need to go through different aisles searching for the product.

This shows the faith consumers have in the online process, which in turn would allow them to have trust in ODR as it offers the same benefits as e-Commerce which are minimising costs, saving time through using simple procedures, and avoiding the need for traveling. Not all consumers have faith in the online process and there may be some doubts and downsides to e-commerce and ODR. It is important to acknowledge these concerns and to address them in order to build trust and confidence among consumers. Some common concerns include issues such as security, privacy, and the possibility of fraud.

An example of online consumer dispute resolution is discussed below.

3.1 eBay

eBay is an online marketplace that has grown exponentially over the years. eBay facilitates consumer-to-consumer and business-to-consumer sales via its website. eBay sees about 2 billion transactions a day.²⁹ The

²⁸ Statista date unknown <https://www.statista.com/study/70380/e-commerce-in-south-africa>.

²⁹ Abbey 2015 <https://parade.com/420625/alison-abbey/ebay-turns-20-10-things-you-may-not-know-about-the-site>.

marketplace is available all over the world. According to Colin Rule, the number of disputes filed in eBay exceeds the volume of the civil court system in the United States.³⁰ That presents a capacity problem, because unless eBay hires over 5000 online mediators, consumer cases will not be resolved quickly. Even then, with the growing number of users, there is no guarantee that there will be a sufficient number of mediators to enable them to handle the cases. The other issue that eBay faced was that the marketplace was available all over the world, which then meant that different time zones were involved and also different languages. This led to eBay designing a software programme to assist the parties in resolving their disputes, and to involve human neutrals only in exceptional cases.³¹ The eBay dispute system was first launched to handle only "fraud alerts" and later expanded to include "item not received", "item not as described" in the case of consumers as complainants, and "item not paid for" in the case of the seller as the complainant. The most important feature of the eBay dispute resolution system is that it does not cover consequential damages, thus allowing the parties to file a civil case in court for such a claim. Consequential damages can arise in many instances, such as when a consumer purchases from a seller on eBay a computer which is meant to simplify and process work quickly and efficiently, and the computer malfunctions or does not work to the standard advertised on eBay, causing a loss of income on the part of the seller. The seller may refer a claim for the computer to the eBay ODR system but may not claim for the loss of income there. For that, he would need to use the civil court system.

When a buyer (a consumer) files a claim on the eBay dispute resolution system, eBay allows the user to select the issue in the complaint and to suggest a preferred solution to the buyer. The eBay system guides the buyers and sellers through a series of questions aimed at pinpointing the main issue and making sure that the issue referred by either party falls within eBay's general policy. The system then allows the buyer and the seller to communicate directly through the online system. Should the matter remain unresolved, the party may then refer and escalate such a claim to the eBay Resolution Services team, which will then evaluate the claim and make a decision. The party unhappy with the decision has the option to appeal such a decision using the eBay dispute resolution platform, and to provide more information, such as images.

The eBay dispute resolution system is a perfect example of ODR. The whole dispute resolution process is conducted online, employing the use of various technologies aimed at streamlining the issues and resolving the dispute with speed and efficiency.

³⁰ Rule 2017 *University of St Thomas Law Journal* 356.

³¹ Rule 2017 *University of St Thomas Law Journal* 356.

3.2 *Concilianet*

Concilianet was created in 2008 and is operated by the Federal Consumer's Office (PROFECO).³² This is a free ODR platform aimed at resolving disputes between merchants and their customers. It started as a pilot programme in 2008 and has now been implemented nationwide. It provides consumers with an online platform to resolve disputes.

Consumers have to register on the platform and may then file claims based on any disagreement with the supplier. Claims can be based on several issues such as a breach of warranty, a breach of contract or a refusal to surrender.³³

The dispute resolution process is simple. The consumer would file a claim and Concilianet will determine whether the claim falls within the system's jurisdiction within five days. If it does, it will email the date and time of the settlement hearing to the consumer. The hearing takes place online through the Concilianet. The consumer, the supplier and the mediator provided by Concilianet would then meet and attempt to resolve the dispute.

The only remedy available through Concilianet is an order for contract performance. Consumers seeking other relief may approach the Courts. The important feature of Concilianet is that consumers may file claims against any merchants, even those not registered with Concilianet. Concilianet has reduced the time for resolving disputes by 50% and has led to settlements in almost 96% of cases filed through its platform.³⁴

This is an example of a consumer dispute resolution system that was created by a government agency, as opposed to a private dispute resolution process like that previously discussed.

³² Concilianet date unknown <https://concilianet.profeco.gob.mx/Concilianet/inicio.jsp>. The information provided on the website is written in Spanish and was translated with the use of Google Translate and Apple Translate. There may be some discrepancies.

³³ Concilianet date unknown <http://concilianet.profeco.gob.mx/concilianet/faces/ques.jsp>.

³⁴ University of Missouri Law School Library 2024 <https://libraryguides.missouri.edu/c.php?g=557240&p=3832249>.

3.3 Civil Resolution Tribunal

The Civil Resolution Tribunal (CRT) is Canada's ODR platform aimed at resolving strata³⁵ and small claims disputes. This was created in terms of the *Civil Resolution Tribunal Act*.³⁶

Consumers start the process by visiting Solution Explorer on the website, which offers free legal information and provides the consumer with the correct CRT application form for the type of dispute.³⁷ Once the application has been accepted, the parties can then use the online secure negotiation platform. The CRT facilitates a collaborative dispute resolution approach as opposed to the traditional courtroom approach. Should the parties fail to reach an agreement, a case manager will then mediate the case between the parties. Should they reach a settlement agreement, it can be turned into an order and enforced like a court order. Should the mediation fail, an independent CRT member would then make a binding decision about the dispute and such a decision can be enforced like a court order.³⁸

3.4 Conclusion of ODR

ODR presents many opportunities for consumers and suppliers in the resolution of their disputes. ODR can take many forms and can be tailored for every type of consumer dispute. As earlier explained, ODR is not meant to replace the court system, but rather to supplement it by providing fast and efficient dispute resolution processes for the consumers without the consumer having to spend funds on legal fees and travel distances to court. The systems identified above provide some form of mediation and there is always a human third party involved. This then presents challenges such as capacity and delays because if there is a rise in the number of disputes, there should be several human neutrals available to resolve such disputes. This also means that government agencies like the CRT above will incur the costs of salaries, and private companies like eBay will also incur salary costs for human neutrals.

Various ombuds and agencies make use of ODR processes in South Africa, and since they rely on human neutrals there are long delays involved, which often deter consumers from filing their claims. Technology is evolving rapidly; many companies have been using artificial intelligence for production and other services. This presents an opportunity for South Africa to harness Artificial Intelligence to resolve consumer disputes. Artificial

³⁵ In New South Wales, Australia, strata law governs property rights, obligations, and management within a strata scheme. A strata scheme is a form of property ownership where multiple lots are contained within a larger building or development (commonly an apartment block).

³⁶ *Civil Resolution Tribunal Act*, 2012.

³⁷ *Civil Resolution Tribunal Act*, 2012.

³⁸ *Civil Resolution Tribunal Act*, 2012.

intelligence is explained below, and examples are given of how it has been used around the world in the legal sector.

4 Artificial Intelligence

Artificial intelligence (AI) refers to the field of science, engineering and technology that focusses on the creation of intelligent machines.³⁹ AI then refers to the development of machines in such a way as to allow them to perform human functions – in most cases in a much better and more efficient way.⁴⁰ The main aim of developing AI is to create machines that can perceive and respond to their environment independently and perform tasks that would typically require human intelligence and decision-making processes, but without direct human intervention. Currently artificial intelligence is used in different justice systems, including the criminal justice system, where AI is used to improve its outcomes, to cut crime, and to reduce justice-related delays.⁴¹ This opens room for the development of AI to be used in ODR.

There are two main branches of AI in the field of law that present opportunities for the development of machine systems able to handle legal disputes. The knowledge-based system comprises a rule-based system that has knowledge based on rules. The case-based system bases its decision on prior cases and not on rules.⁴² The second branch is machine learning, which is divided between supervised learning and unsupervised learning.⁴³

The important thing to note about artificial intelligence is that these machines rely on information uploaded to them or information received from the internet. It is possible to programme AI to receive information from credible sources such as the court website, which provides regular case updates and judgments. The developers can upload current legislation onto the system, and the System may interpret the law (rule-based) through machine learning while taking into consideration past judgments concerning similar cases. AI machines process large volumes of information and based on data uploaded to them or received through the internet they can learn and improve in a particular matter.⁴⁴ The capabilities of AI to read and analyse legal information have proven to be a success. Current document

³⁹ Mills 2016 <http://legalexecutiveinstitute.com/artificial-intelligence-in-law-the-state-of-play-2016-part-1/>.

⁴⁰ Schatsky, Muraskin and Gurumurthy 2014 https://www2.deloitte.com/content/dam/insights/us/articles/what-is-cognitive-technology/DUP_1030-Cognitive-Technologies_MASTER.pdf 3.

⁴¹ Rigano 2018 <http://www.nij.gov/journals/280/Pages/using-artificial-intelligence-to-address-criminal-justice-needs.aspx>.

⁴² Barnett and Treleaven 2018 *Computer Journal* 402.

⁴³ Barnett and Treleaven 2018 *Computer Journal* 402.

⁴⁴ Surden 2019 *Ga St U L Rev* 1316.

discovery programmes utilise predictive coding to read and analyse millions of pages of discovered documents and can select relevant material in a fraction of the time that human labour would require.⁴⁵ Such systems can be used in consumer disputes to search thousands of pages relating to consumer laws, including court judgments, and to select relevant provisions concerning the issue at hand.

One of the benefits of AI systems is that they do not require rest or sleep as humans do, which would allow consumers to have access to these systems at any time of the day and night. Further, one might also argue that such systems do not need to get paid – as humans do.

The main argument of this paper is for the creation of an automated system, using AI that could handle consumer disputes and issue automated decisions. Automated computer systems are already in use in other fields, such as the health sciences, where AI is being used to detect cancer in patients. At Tulane University researchers discovered that AI can accurately detect and diagnose colorectal cancer by analysing tissue scans as well as or better than pathologists.⁴⁶ Similar systems could be developed in the field of law to analyse cases and judgments and thereafter make decisions based on the facts of a case. Thompson submits that an ODR system controlled by AI may use expert knowledge and intelligent questionnaires to provide claimants with different functions and guidance specific to their circumstances.⁴⁷

In short, designers of the online dispute system could incorporate AI into their systems. AI can process large volumes of information and decide by applying the rules and law to the facts of the dispute. A perfect example of this would be eBay's online dispute resolution, as it incorporates online dispute resolution, AI, and in some cases human neutrals. As was explained earlier, a party would be guided by the eBay system into selecting the appropriate issue in dispute, and based on the issue selected the system would then ask a series of questions to which the user would have to select answers online. Once the issue in dispute has been identified, the seller would be contacted by the system and the same thing would happen again the seller being guided by the system into choosing his defence. This process would continue until the issue was quantified and a decision reached by the parties, and/or the AI system had reached a determination.

AI can be used to analyse information and offer advice. It can also be used to analyse information and then render a decision. This argument is based

⁴⁵ Sourdin 2015 *JJA* 103.

⁴⁶ Mcnemar 2021 <https://healthitanalytics.com/features/top-opportunities-for-artificial-intelligence-to-improve-cancer-care>.

⁴⁷ Thompson 2015 *International Journal of Online Dispute Resolution* 53.

on the research that has been conducted using AI computer programmes wherein the outcomes of cases were predicted by the AI system using predictive analysis.⁴⁸ Aletras developed an AI programme to analyse the judgments of the European Court of Human Rights in order to discover patterns.⁴⁹ Upon analysing the judgments and patterns, the AI system was able to predict the outcomes of cases with 79 per cent accuracy.⁵⁰ This was possible because through a process called machine learning AI analyses past data to develop rules that are generalisable going forward.⁵¹ The same AI machine learning could be developed and used in consumer cases wherein the AI programme would analyse past judgments and render accurate decisions.

Machine learning is useful where the information analysed is similar to the information presented to the AI.⁵² This poses no major issue in consumer disputes because most of the consumer disputes can be put into a few categories: item not delivered; item delivered late; item not as per advertisement; item delivered damaged. There is a plethora of case law in South Africa dealing with the same consumer issues in all of these categories. Through machine learning AI would analyse those judgments, apply the law to the information presented, and render a decision.

It would be impetuous to migrate the whole consumer dispute resolution into an online dispute system using AI without considering the downside of AI. While it offers great opportunities, there are still issues that need to be considered in designing the AI ODR system. An automated system would require the use of machine learning, which in turn would require data. The system would have to comply with the data protection laws of South Africa, including the provisions of the *Protection of Personal Information Act*. Consumers require a system they can trust. The best way a designer of such a system could gain the consumer's trust would be by addressing the issues of personal (data) protection - and the system must be transparent. Users of the system should have information about how the AI ODR system arrived at a decision and why it arrived at such a decision. That could be done by showing authorities for such a decision. The authority could be case law, legislation, or past decisions taken by the consumer tribunal.

⁴⁸ Aletras *et al* 2016 *PeerJ Computer Science* 1.

⁴⁹ Aletras *et al* 2016 *PeerJ Computer Science* 1.

⁵⁰ Aletras *et al* 2016 *PeerJ Computer Science* 11.

⁵¹ Surden 2014 *Wash L Rev* 87, 105.

⁵² Surden 2014 *Wash L Rev* 87.

4.1 *Her Majesty's online court*

The Civil Justice Council (CJC) recommended the creation of an online court for civil disputes under the value of £25 000.⁵³ The CJC holds that "online dispute resolution (ODR) is an area with enormous potential for meeting the needs of the system and its users in the 21st Century".⁵⁴ The CJC proposed a three-tier online court system.

- a. The first tier would prioritise online evaluation.⁵⁵ It would allow disputants to evaluate their problems through inputting information into an online system that would categorise their issues, provide information about their rights and entitlements, and suggest options available to resolve the dispute.⁵⁶ The main aim of this tier is to provide legal information to the parties and then allow them to attempt to settle their disputes on their own.
- b. Tier Two would provide online facilitation. This tier involves online facilitators who would communicate with the parties via the internet, would review the information provided by the parties, such as the statements and documents, and then would attempt to help the parties through mediation and negotiation.⁵⁷ In addition to this, the use of automated negotiation by the system would be employed, without the intervention of human experts.
- c. Tier Three involves online judges. This would be the last tier and would be available only if the parties failed to reach an agreement. Full-time and part-time members of the judiciary would decide on the case based on the information and documents provided by the parties.⁵⁸ The judges could use telephone conferencing to connect with the parties, should the need arise. The decision by the judges would be binding and enforceable like any other judgment made in a courtroom.

⁵³ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf>.

⁵⁴ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> 2.

⁵⁵ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> 6.

⁵⁶ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> 6; Sourdin 2018 *UNSW Law Journal* 1120.

⁵⁷ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> 6.

⁵⁸ Online Dispute Resolution Advisory Group 2015 <https://www.judiciary.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> 6.

This system was supported by Lord Justice Briggs.⁵⁹ He suggested the possibility of face-to-face hearing in the third tier as a last resort.⁶⁰ He further held that the online court would allow parties to appeal cases in the main physical courts, like any other appeal.⁶¹ He held that should this online court be established, judges would need to adopt a more investigative approach than an adversarial approach,⁶² thereby keeping up with the public policy considerations of alternative dispute resolution.

What is significant about this system is that in the first tier the system uses AI to assist and advise parties about their cases. If AI can advise parties, surely it is capable of rendering a decision. This system was accepted by the Court Justices, as has been explained. Thus, Justice Griggs accepted the system and made further recommendations to advance the system.⁶³

5 Blockchain technologies

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system.⁶⁴ Blockchain technology is impenetrable and cannot be altered. There are many uses of blockchain, one of them being a smart contract, which is self-executing. The fact that blockchain cannot be altered or deleted renders it secure and safe from hacking, as against the situation in the past, when databases could be hacked.⁶⁵ The traditional way of storing data by cloud storage is prone to misuse and the information is centralised.⁶⁶ That makes it prone to hacking. Blockchain, on the other hand, is decentralised. The Chinese courts are embracing the use of blockchain technology.⁶⁷ The Internet courts in China have accepted blockchain as a means of storing evidence and authentication.⁶⁸ This is particularly useful for online evidence from disputes that are generated and stored on the Internet.⁶⁹ The Supreme People's

⁵⁹ Briggs 2015 <https://www.judiciary.uk/wp-content/uploads/2016/01/ccsr-interim-report-dec-15-final1.pdf> 58, 76.

⁶⁰ Briggs 2015 <https://www.judiciary.uk/wp-content/uploads/2016/01/ccsr-interim-report-dec-15-final1.pdf> 78.

⁶¹ Briggs 2015 <https://www.judiciary.uk/wp-content/uploads/2016/01/ccsr-interim-report-dec-15-final1.pdf> 78.

⁶² Briggs 2015 <https://www.judiciary.uk/wp-content/uploads/2016/01/ccsr-interim-report-dec-15-final1.pdf> 78.

⁶³ Aside from Justice Gregg, Chief Justice Warren also suggested another online court model. Warren 2015 *JJA* 14.

⁶⁴ Euromoney Learning 2020 <https://www.euromoney.com/learning/blockchain-explained/what-is-blockchain>.

⁶⁵ Sahu 2020 <https://www.upgrad.com/blog/how-to-use-blockchain-to-store-data>.

⁶⁶ Sahu 2020 <https://www.upgrad.com/blog/how-to-use-blockchain-to-store-data>.

⁶⁷ Supreme People's Court, *White Paper on Chinese Courts and Internet Judiciary* (2019) 74.

⁶⁸ Supreme People's Court, *White Paper on Chinese Courts and Internet Judiciary* (2019) 74.

⁶⁹ Sahu 2020 <https://www.upgrad.com/blog/how-to-use-blockchain-to-store-data>.

Court has stated that digital data stored and authenticated by blockchain will be valid evidence in legal disputes before the Internet Courts "if the relevant parties collected and stored these data via blockchain with digital signatures, reliable timestamps, and hash value verification".⁷⁰ In terms of the *White Paper on Chinese Courts and Internet Judiciary*, national e-evidence-based blockchain technology has been established linking the courts in twenty-two provinces and municipalities.⁷¹

Blockchain presents many opportunities for the legal field and dispute resolution. However, not much research has been done and it is still a developing sector. Thus, it may pose risks that are yet unknown. As research shows, however, it provides secure data storage, which is important in the case of online dispute resolution, since data privacy is important and consumers would not trust a system that would leave their data vulnerable to hacking. In 2021 the South African judiciary and the Department of Justice suffered a cyber-attack.⁷² The Integrated Case Management System that contains information about the cases was exposed to the cyber-attack. This was because the cloud storage system is centralised. By using blockchain technologies to securely store data, such incidents can be avoided. There are other uses of blockchain, but due to their technical nature they will not be explored in this paper.

6 Designing an AI ODR in South Africa

The author proposes an online system of dispute resolution that incorporates the use of AI. Due to the lack of adequate research available on blockchain technologies, the system would not incorporate such technologies. However, the state must take preventative measures to secure consumer data online.

The online dispute resolution system should be made available on the National Consumer Commission website. Such a system would, like the eBay system, require users to register and file their disputes online. The system would then guide the consumer into selecting the appropriate dispute, using a series of questions and answer options.

The author proposes a tier system in which tier one would be a conciliation tier. Both disputants would be guided by the system in negotiating the dispute. Should this tier fail, then the dispute would be moved into the second tier, wherein the AI system through machine learning would render a decision. A party who is not satisfied will have the option to appeal such a

⁷⁰ Sahu 2020 <https://www.upgrad.com/blog/how-to-use-blockchain-to-store-data>.

⁷¹ Supreme People's Court, *White Paper on Chinese Courts and Internet Judiciary* (2019) 74.

⁷² Makhafola 2021 <https://www.news24.com/news24/southafrica/news/department-of-justice-says-its-recovering-from-cyber-hack-causing-court-case-delays-20211010>.

decision to a third tier, where an arbitrator would, based on the information previously provided by the parties, and the reason provided by the AI, render a binding arbitration decision that can be reviewed in court only if it should meet any of the requirements of review in terms of the *Arbitration Act*.

The CPA makes provision for the referral of a dispute to an alternative dispute resolution agent subject to section 70 of the Act.⁷³ In terms of section 70(1)(c) a consumer may seek to resolve the dispute by referring it to a person or "an entity providing conciliation, mediation or arbitration services".⁷⁴ An AI-based online dispute resolution system meets the requirements of section 70 since it will offer conciliation, mediation and arbitration services.

Should the dispute be too complicated for the AI, upon review by the human expert working for the consumer commission the matter should be removed from the system and the consumer be advised to approach the correct redress mechanism, such as the consumer court. This is in accordance with section 70(2) of the CPA, which states that if there is no reasonable probability of the parties resolving their dispute, the alternative dispute resolution agent may terminate the process by notice to the parties, and the party who referred the matter to the agent may file a complaint with the Commission.

It is important to note that not everyone knows the law, thus one of the parties might raise that as an argument of appeal against the decision, citing that he did not understand the nature and consequences of the dispute process. The author proposes that the National Consumer Commission prepares information guides in all eleven South African languages, and such a guide must be made available to the parties before the dispute resolution process commences.

7 Conclusion

The *Consumer Protection Act* provides various avenues of redress to consumers. However, as was discussed in the previous sections, the redress avenue is too long and takes a lot of time. That ends up deterring consumers from following the formal redress processes. The CPA allows for the use of an alternative dispute resolution provider who provides conciliation, mediation and arbitration services. The proposed system provides all such services. It thus meets the requirements of the CPA. Such a system would be beneficial to all consumers, even to those living in outlying areas where there is no court system or where there are no National

⁷³ Section 69(c)(iii) of the CPA. The section provides as follows: "(iii) referring the matter to another alternative dispute resolution agent contemplated in section 70".

⁷⁴ Section 70 of the CPA.

Consumer Commission offices. Since the AI dispute resolution system will be online, consumers can file cases using their mobile cell phones. Most of the national government websites have the option to change the language to one of the South African official languages. This can also be implemented into online consumer dispute resolution to make it friendly and accessible for every consumer in South Africa. It is important to note that the argument presented here is based on the present potentials of AI and blockchain technologies. Additionally, issues such as personal data privacy need to be taken into consideration.

It is submitted that further research should be conducted to ascertain the role blockchain technologies could play in online dispute resolution. The current research on blockchain technologies proves that they can play a vital role in securely storing consumer data online. Data protection is one important element of online dispute resolution.

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List of Abbreviations

ADR	alternative dispute resolution
AI	artificial intelligence
CJC	Civil Justice Council
CPA	Consumer Protection Act 68 of 2008
CRT	Civil Resolution Tribunal
Ga St U L Rev	Georgia State University Law Review
JJA	Journal of Judicial Administration
ODR	online dispute resolution
OECD	Organisation for Economic Co-operation and Development
PELJ	Potchefstroom Electronic Law Journal
SA Merc LJ	South African Mercantile Law Journal
SABS	South African Bureau of Standards
SALJ	South African Law Journal

UNSW Law Journal
Wash L Rev

University of New South Wales Law Journal
Washington Law Review