

Kluwer Mediation Blog

What can mediators learn from Kleros, a platform which uses cryptocurrency and game theory to resolve disputes?

Bruce Greig (Bruce Greig, Civil and Commercial Mediator) · Sunday, March 6th, 2022

[Kleros](#) is a cryptocurrency dispute resolution platform. It uses crypto tokens and game theory to resolve real-world disputes. It follows an automated process with no discussion, no nuance, no probing questions. It seems to be at the opposite end of the dispute resolution spectrum to mediation. Yet I think there is something that mediators can learn from this.

Let me first explain how Kleros works. Kleros is an online dispute resolution system based on the Ethereum blockchain. It can be used to resolve any real-world dispute, although it is mostly used for technical disputes at the moment.

Parties to a dispute each submit their evidence to the platform. “Jurors” review the evidence and vote on an outcome. Jurors are real people chosen at random from a panel with expertise in the subject matter. The outcome of the dispute is determined by a majority vote of the jurors.

The fact that this runs on a blockchain makes it very hard for malicious actors to manipulate the process. But the actual decision-making is done by real people. The crypto tokens, named Pinakion after the [tokens used to select jurors in ancient Athens](#), are used to reward jurors who make high-quality decisions.

Here’s how that aspect works: jurors have to stake tokens (which have real-world value) to be on the panel. They lose their stake if they vote against the majority. They are rewarded with a share of those lost stakes, plus the fee that the parties have paid, if they vote with the majority. This incentivises jurors to make careful, considered decisions. If they vote randomly, or carelessly, they will tend to lose their stake.

Importantly, the jurors cannot communicate with each other, so they need to cast their vote based not only on what they think is the correct outcome, but also based on how they expect another honest well-informed juror will vote.

In game theory, this is known as a [Schelling point](#): the outcome that well-informed decision makers are likely to reach if they need to reach a consensus without communicating. For example, you are told you have to meet Bob tomorrow at noon in London, but you don’t know where. All you know is that Bob also knows that he has to meet you somewhere at noon in London. Where do you go to meet him? After some thought, you are both quite likely to choose “Piccadilly Circus” as the meeting point, because that is a well-known meeting point which you would each think the

other is likely to select. This is the Schelling point.

Kleros uses this same mechanism: jurors need to think carefully about what other jurors are likely to decide, and cast their vote accordingly.

You can see that Kleros is obviously not a mediation platform. It is an arbitration platform. And the fact that the arbitrators (jurors) cannot discuss anything with the parties, and the arbitrators cannot even discuss the case amongst themselves, perhaps puts it as far from mediation as it is possible to get.

But I have found that just thinking through the mechanics of Kleros has helped me in my mediation practice, in two ways.

Binary outcomes

Firstly, the Kleros court generally requires each party to propose just one desired outcome. For example, Alice says that Bob didn't build her house extension to the correct standard and should refund her £50k. Bob says the work is exactly to standard, and actually Alice has failed to pay the final bill, so she should pay him £25k.

Therefore there are only two outcomes for the jurors to choose from: either Bob pays Alice £50k, or Alice pays Bob £25k. This forces the parties to submit something reasonable. If Alice adds in sums for all sorts of other things that the jurors are unlikely to accept, they will probably reject her claim and will have to vote for Bob's claim.

(It is possible for Kleros to handle claims with more than two possible outcomes, but this can create voting paradoxes similar to those that arise in political elections, where a vote is split between two popular candidates, causing an unpopular candidate to win. So Kleros works best where jurors are selecting one of two outcomes. [Read more about multiple outcome voting.](#))

Comparing this to mediation, it is often the case at mediation that parties start very far apart, with each party expecting to be the net receiver of money when the case concludes. Each side often starts from the position that "I'm 100% right, the other side's claim has no merit". Parties may also have inflated their claim or counterclaim in an attempt to scare off the other side.

As a mediator, part of our job is to reality-test these positions and encourage the parties to see some of the other side's point of view. Traditionally, we do this through asking questions like "what is the strongest part of the other side's case?", "what happens if this ends up in court?" and so on.

What if the mediator asked the party to imagine they are preparing their case for Kleros. They can only select one outcome to submit with their claim. What outcome would they choose to submit?

That is, what outcome would they be confident would be selected by a small group of well-informed honest jurors?

For me, this thought experiment feels more thought-provoking than the staple question of "what do you expect will happen if this goes to trial?" It is all too easy for litigators and their clients to convince themselves that they can win over a professional judge. By the time they arrive at the mediation, they have usually already filed a claim and are getting ready for trial. They will have

prepared careful arguments to put forward to the judge. It is easy to imagine winning at trial. And although judges sometimes berate parties for throwing the kitchen sink into the claim, there really isn't much to lose from building your claim up to the largest amount possible.

But what if you are not coming in front of a judge, but in front of a small group of well-informed experts, who are unable to confer? What number would you really ask them to consider?

If the mediator runs this thought experiment with both sides, it may be that the gap between them shrinks rapidly.

Party-turns-juror

Secondly, as a mediator, you could take this thought experiment a little further and ask the parties to consider what outcome they would choose if they were a Kleros juror in this case. Remember, they cannot just choose the outcome they like, they must choose the outcome which they think that the majority of anonymous fellow jurors will choose.

Of course, the parties are unlikely to say "Oh, yes, good point, I'd vote for the other side". But merely asking this question might help each side think about the dispute from a new perspective, and this might help make some progress in the mediation.

Closing the final gap

Finally, I can imagine cases where the two sides have moved much closer, but do not settle. Try as we might, there are times when we, as mediators, just cannot get the parties over the line to a settlement. The next step for the parties is usually to plough on to a trial, or formal arbitration, with all the expense and stress that entails.

However, the issues have usually become much clearer and parties have moved closer, over the course of the day, leaving a smaller gap to close.

Could they use a service like Kleros to close that final gap? Would this have some advantage over using a court or traditional arbitrator? It should be faster and less expensive. You would still need to prepare all your evidence, but somehow it seems less daunting to prepare a case for a panel of expert jurors, than to prepare for a single arbitrator or judge. It somehow feels that you could focus on a handful of key points which the jurors really need to understand, rather than needing to cover every fact and every intricate point of law.

The direction of travel in the UK seems to be towards having many settlement opportunities built into the lifecycle of a dispute, each tailored towards the circumstances prevalent in that dispute at that time. Systems like Kleros could fit into that range of dispute resolution mechanisms. And, as I have outlined above, just being there in the background, as a possible route to settlement, might help parties see their own way through to resolving their dispute.

Useful links:

[Kleros](#)

[Kleros dashboard](#), to browse current cases

[My video explanation of how Kleros works](#)

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The graphic features a black background with white text and a circular icon. The icon depicts a group of five stylized human figures, with a magnifying glass positioned over the central figure. The background is accented with horizontal lines in blue and green.

This entry was posted on Sunday, March 6th, 2022 at 10:51 am and is filed under [ADR](#), [Bias](#), [Commercial Mediation](#), [Dispute Resolution](#), [Game Theory](#), [Mediation Outcomes](#), [Mediation wisdom](#), [Reality-Testing](#)

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