

Artificial intelligence in proceedings relating to the so-called 'Dieselgate' scandal*

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Mass proceedings have burdened the courts for as long as it has taken to identify effective applications of artificial intelligence for justice. At the Stuttgart Court of Appeal, there has been a breakthrough: a digital assistant relieves judges of repetitive and monotonous work and helps them classify and deal with proceedings relating to the so-called 'Dieselgate' scandal.

1. The OLGA pilot project, the assistant to the Higher Regional Court

When it comes to artificial intelligence (AI) in the context of justice, many immediately think of the 'robot judge'. However, the assumption of judicial functions by a machine is highly questionable, and not only in light of Articles 92¹ and 97² of the German Constitution. If, on the other hand, AI-based applications are considered as assistants, their use can fully meet the needs of justice, as they are simply collaborators who perform tedious and time-consuming tasks that are far removed from the main activity of judges, lightening their workload and thus creating the space and time necessary to evaluate the facts and make decisions.

This consideration was the starting point and guiding idea behind the OLGA pilot project (short

for 'Oberlandesgericht-Assistent', or 'Higher Regional Court Assistant'), carried out in collaboration with the Ministry of Justice and Migration Baden-Württemberg and project partner IBM, which was launched at the Higher Regional Court of Stuttgart in 2022 – where the conditions for such a project were truly ideal:

As the headquarters of major car manufacturers, Stuttgart has been the subject of numerous proceedings relating to the so-called 'dieselgate' scandal, which involved several car manufacturers – such as Volkswagen, Mercedes and Porsche – which supposedly had software installed in their vehicles that reduced nitrogen oxide (NOx) emissions only during type-approval tests, while actual emissions on the road were many times higher. This possibly deceptive or at least negligent behaviour had serious repercussions on the environment, health and

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1. Article 92 GC: The judicial power shall be vested in the judges; it shall be exercised by the Federal Constitutional Court, by the federal courts provided for in this Basic Law and by the courts of the Länder.

2. Article 97 GC:

(1) Judges shall be independent and subject only to the law.

(2) Judges appointed permanently to positions as their primary occupation may be involuntarily dismissed, permanently or temporarily suspended, transferred or retired before the expiry of their term of office only by virtue of judicial decision and only for the reasons and in the manner specified by the laws. The legislature may set age limits for the retirement of judges appointed for life. In the event of changes in the structure of courts or in their districts, judges may be transferred to another court or removed from office, provided they retain their full salary.

the economy, including a possible reduction in the resale value of vehicles and potential repair costs.

Almost all decisions by the regional courts were appealed, so many thousands of proceedings went to appeal. In Germany, almost no other court was as overburdened as the Higher Regional Court of Stuttgart: in 2023, more than 13,000 appeal proceedings were pending for diesel-related cases alone, and hundreds of new ones were filed every month. Four specialised tribunals (so-called *Senates*) had been designated to deal with these mass (or better serial) proceedings³, but with traditional procedures it would have taken years to clear such a huge pile of work. However, this pile could also be tackled by mechanical means, as the files of the civil tribunals of the Stuttgart Court have been managed electronically since 2019 and the regional courts of Baden-Württemberg were now using digital files and electronic management and archiving throughout the federal state of Baden-Württemberg. The result was a huge wealth of data from over 13,000 appeal proceedings, in which all relevant documents, such as first-instance judgments, grounds for appeals and response briefs, were available in electronic form. Their use provided an excellent basis for 'training' the algorithms that integrate the application of artificial intelligence for the purpose of assistance and support in 'diesel' proceedings.

The main motivation behind the AI project is obvious: as in all mass proceedings, the files relating to diesel cases are often very similar to each other. The law firms involved work with predefined claim forms, which is why reading the contents of the files can be rather monotonous. Although similar proceedings can be grouped into categories to facilitate their processing and handling, certain data must be identified for their classification and subsequent stages, such as the type of vehicle and engine, the applicable emissions standard or whether the car has been recalled, which can be time-consuming if done manually. It is not uncommon for appeal documents to exceed 180 pages, and despite the use of legal technology by solicitors, the relevant data is not always found in the same places and is not easily identifiable. Sifting through these documents in search of decisive data is like painstakingly digging for diamonds in the ground, and copying and pasting this information from electronic files to other documents is very time-consuming.

This is where OLGA's artificial intelligence comes in: artificial intelligence applications can perform re-

petitive tasks that take people a long time in a very short time, and, of course, it is possible to automate the digital search for information diamonds, so that the system is always up to date and takes into account new files that have been added.

For each Diesel tribunal proceeding, OLGA analyses the contested first instance judgment, the grounds for appeal and the arguments in the response to the appeal. Thanks to its semantic capabilities, the AI is not only able to recognise sections within these documents, such as the record of proceedings before judgement and the facts of the judgment or the claims in the lawyers' briefs, but also to identify and classify the information sought for classification regardless of its location; and, if a piece of information is found, for example, in the part of the facts that are no longer disputed, it is particularly reliable for obvious reasons. All the parameters that OLGA has to search for are predefined by the judges of the specialised tribunals competent in diesel matters. The tribunals also provide guidance on the categories of cases, identified on the basis of their own case law, thus specifying how OLGA should classify proceedings on the basis of the parameters identified.

2. Comprehensible assistance

Judges can access their proceedings via a user-friendly web interface and sort them according to various criteria, using multiple filters simultaneously. This makes it possible to deal with similar proceedings 'in bulk'.

Presiding judges can also use OLGA to schedule hearings and view, for example, all proceedings in their section that meet certain parameters (e.g. same type of engine, same emissions standard, no vehicle recall) and are being handled by the same representatives of the applicants. This makes it possible to plan more effective hearing days, which also benefits the parties and their representatives.

For cases that do not need to be discussed in court because the tribunal considers it appropriate to proceed in accordance with § 522(2) ZPO⁴, OLGA supports the customisation of decision templates that tribunals can adopt: in this way, additional parameters that have already been analysed and extracted, such as the purchase price and date of purchase, mileage at the time of purchase and at the time of the last

3. The Dieselgate cases are not and have never been part of class action proceedings, as the German procedural law does not know class action proceedings at all. Something quite similar, but also very different, has been introduced as "Musterfeststellungsklage" – and this instrument was also used with respect to Dieselgate, but with a lot less success than anybody involved had hoped.

4. The German Code of Civil Procedure provides for the possibility of rejecting an appeal through a simplified procedure when the grounds appear manifestly unfounded; on this institution, see R. Caponi, *La riforma dei mezzi di impugnazione* (The reform of appeals), in Riv. trim. dir. proc. civ., 2012, issue 4 (Translator's note).

hearing, are automatically inserted into the relevant points of the body of the decision, saving judges the tedious task of searching, manual 'copy and paste', and thus a great deal of working time, to the benefit of all citizens seeking justice, thanks to the faster processing of proceedings.

From the outset, the project team considered it particularly important to design the system in such a way that each step supported by artificial intelligence remained verifiable: judges can view each parameter and its location in the relevant procedural document and thus determine whether OLGA 'was right'.

In quite a few cases, however, it is not possible to unambiguously assign a procedure to a group or category of cases, because the system has found multiple or contradictory results in the same category.

If the assistant is unable to proceed, the user can quickly and confidently decide how to handle and resolve the case based on the results presented.

In every proceeding, it is always the judges who decide after careful evaluation of all the information: OLGA simply acts as an intelligent researcher based on judicial specifications and can therefore be compared to a legal assistant or collaborator.

3. A new participatory method

The Higher Regional Court of Stuttgart has broken new ground not only in terms of the use of AI as such, but also in terms of the method used to implement it, with an interdisciplinary path 'from idea to actual implementation': unlike the usual experience of members of the judiciary in IT projects, colleagues were not presented with a finished product, developed externally according to specifications established years earlier, but were actively involved from the outset.

Already in the first phase of the project to create a prototype demonstrating the feasibility of the idea, the judges of the specialised tribunals for diesel-related issues – chairpersons and associate judges alike – worked in the project group and, together with the judiciary's IT managers and IBM's IT experts and designers, developed the requirements for the system and its user interface in interdisciplinary workshops. The working method, which was initially unusual for the judges – during the pandemic, for example, digital post-it notes were stuck, annotated or drawn together on online whiteboards during video conferences – created a deep mutual understanding of each other's ways of thinking and working, thus ensuring

the success of the project. In the subsequent pilot phase, each specialised tribunal was also represented by a judge in the project group.

In summary, the development of OLGA, from the initial idea to its implementation, took around six months, which is why it can be assumed that the judiciary will also be able to deal with future mass proceedings within a reasonably short period of time with the appropriate tools.

The first few weeks of working with OLGA were characterised by familiarisation with the application and feedback to the development team. OLGA was also used for planning hearings, and the user interface was immediately evaluated by colleagues as very positive.

4. OLGA and the new interpretation of compensable damage

However, it was not possible to use all of OLGA's functions to their full extent right away, but not for technical reasons.

A partial setback in the use of OLGA for issuing decisions pursuant to § 522, paragraph 2 ZPO followed the opinion of Advocate General Athanasios Rantos and the legal issues he raised in Case C-100/21, which was brought before the Court of Justice of the European Union in Luxembourg for a preliminary ruling under Article 267 TFEU by the Landgericht Ravensburg (Regional Court, Ravensburg, Germany) in a dispute between QB and Mercedes-Benz Group AG, formerly Daimler AG, 'concerning QB's claim for compensation and the calculation of the amount of compensation to which he may be entitled as a result of the purchase of a diesel motor vehicle equipped with software that reduces the recirculation of polluting gases from that vehicle depending on the outside temperature, which does not comply with the requirements of EU law'. It should also be noted that the possibility that the case law of the tribunals could be confirmed or amended did not affect the prospects for the use of OLGA. The AI application is flexible and can be adapted to changing situations and new requirements, as the parameters to be analysed and the groups of cases are redefined by the judges. Furthermore, other functions, such as the ability to intelligently set dates for similar proceedings conducted by the same legal representatives, were not affected.

Once the issue was resolved by the CJEU ruling of 21 March 2023⁵ and in application thereof, the German Federal Court of Justice (BGH), in its ruling of

5. The judgment can be read at the following link: <https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=CELEX:62021CJ0100>; it established that European legislation on the type-approval of motor vehicles with regard to emissions from passenger cars and light commercial

26 June 2023, redefined civil liability in the context of 'Dieselgate', introducing the category of 'differential damage' (Differenzschaden), recognising the right to compensation even in the absence of intent, quantified at between 5% and 15% of the purchase price, limiting the damage to the difference in value of the vehicle and excluding the termination of the contract and the return of the goods. The ruling laid the foundations for the resolution of pending appeals, and the specialised tribunals for diesel cases had to demonstrate not only that they were flexible and adaptable, but also that they could become even more efficient as the number of claims still increased.

Following these decisions, an update of the system was necessary: OLGA had to acquire new skills in order to be an even more useful assistant in the future.

The project group began its analysis immediately after the grounds for the BGH ruling were filed and decided what further information would need to be collected and extracted from the appeal documents in the future. In this context, the specialised tribunals of the Higher Regional Court of Stuttgart jointly agreed on the text of an order for the request of data, with which to collect from the parties the necessary information that was not yet available in the files or that was difficult to access for automatic evaluation. One example is the date of first registration of the vehicle in dispute, which, together with the current mileage and chassis number, is necessary to search for the residual value of the vehicle in commercial databases, which constitute a recognised basis for an estimation of damages within the meaning of § 287 ZPO.

5. Automatic determination of residual value...

Following the change in the Federal Court of Justice's case law, in many cases involving diesel engines it has become important to relate the sum of the residual value and the benefit derived from the kilometres travelled to the purchase price originally paid. In this way, in the context of tort law, it is possible to check whether there is a scope for differential compensation, which may be due to the plaintiffs in the case of the use of a manipulation device that is not permitted under § 823(2) BG in conjunction with § 6(1), 27(1) EG-FGV.

To avoid having to perform this process manually for each individual case, OLGA would not only have to extract the relevant data from the electronic files, but also perform queries and calculations independently. To this end, the project team began working on connecting a commercial residual value database via its programming interface for autonomous communication between the two IT systems. OLGA would transmit the necessary parameters to the database, obtain the correct residual value for the individual vehicle and perform the calculations according to formulae predefined by the court.

The basic idea is that OLGA should be able to identify, in a fully automated manner, cases in which the plaintiff, in the absence of damage, cannot have their claim upheld, despite the possible validity of their legal position, and refer them to the judges of the specialised tribunals with jurisdiction over the matter. This may be because the mileage has already exceeded a certain threshold at the time of filing the claim, or because the benefits obtained in the meantime, together with the residual value of the vehicle, exceed the purchase price formerly paid. Not infrequently, the diesel vehicles at issue are models with stable values, which still have such high residual values that, taking into account the benefits obtained, no damage remains. In these cases of no differential damage, it would be conceivable to proceed in accordance with § 522(2) ZPO and thus deal with a substantial part of the enormous volume of proceedings in a considerably simplified manner without an oral hearing, in which OLGA can also provide assistance by identifying the model decisions established by the specialised tribunals.

6. ... and automatic limitation of damages

In cases where there is an unauthorised manipulation system and there remains a delta between the purchase price and the benefits to be calculated, OLGA can calculate the amount of differential damage on the basis of the formulae established by the judges and make this information available for further processing. It is therefore possible to inform the parties to a dispute, even before the date of the hearing is set, of the tribunal's assessment of the factual and legal situation and invite them to reach an agreed

vehicles (Euro 5 and Euro 6) and on obtaining information on the repair and maintenance of vehicles protects, 'in addition to the general interests, the particular interests of the individual purchaser of a motor vehicle vis-à-vis the manufacturer of that vehicle where that vehicle is equipped with a prohibited manipulation device, within the meaning of that provision' and 'EU law must be interpreted as meaning that, in the absence of provisions of EU law on the matter, it is for the law of the Member State concerned to determine the rules relating to compensation for the damage actually caused to the purchaser of a vehicle fitted with a prohibited defeat device, within the meaning of Article 5(2) of Regulation No 715/2007, provided that such compensation is commensurate with the damage suffered'.

solution based on the estimated differential damage, so that they do not have to wait for an oral hearing that may not be scheduled in the near future due to the enormous volume of proceedings to be dealt with.

The relevant information could be generated on the basis of a letter prepared in advance with a simple click and transferred to the electronic archive.

In 2024, a test phase was carried out to verify the hypothesis previously formulated and OLGA's capabilities by the project group: in the oldest registration proceedings, in which the parameters already available indicate the possible absence of differential damage, the specialised tribunals sent the parties the agreed order relating to the request for data. The tribunals limited themselves to a maximum of 100 proceedings each, so as not to overload either the offices or the legal representatives involved in the request.

Once the deadline for submitting comments has passed, the responses received should be transferred from OLGA to the electronic file and analysed. Cases where differential damage can be considered can be dealt with promptly by setting a hearing date. In cases where possible damages have been absorbed, the relevant decisions must be issued using the standard decision templates, which have been agreed and prepared for the respective group of cases, customised by OLGA with the information sought in the files inserted in the appropriate places, e.g. the price and date of purchase, the vehicle model and mileage, but also with the insertion of the parties' claims and the current residual value of the vehicle requested via the programming interface.

The test was intended to demonstrate whether and what further adjustments are necessary to the AI system in order to work with the requested data and provide the best possible support to the special committees for diesel-related issues.

After having been tested successfully, the procedure described above has been gradually extended to all pending proceedings under review in order to make visible and quickly process the likely significant number of cases with exhausted damages, according to the estimates of the plaintiffs' lawyers. This extended use of AI has not only created time and space for cases that need to be dealt with orally, but also allowed the specialised tribunals to quickly reduce the pile of pending appeals – from more than 28.000 appeal proceedings originally filed, less than 5.000 were left to deal with in the fall of 2025.

In 2024, another project group has been working on an AI solution for mass proceedings available to

courts of first instance; however, even as following the change in Supreme Court case law, there has been a slight increase in the number of cases, which then also involved district courts due to the lower value of the disputes, this changed rapidly in 2025 – and with the absence of the dieselgate phenomenon, pressure to provide an AI solutions for the lower courts has subsided. However, other initiatives in the German judiciary such as FRAUKE and MAKI are looking to provide district courts with jurisdiction over major airports with similar solutions to speed up the work on the large number of claims filed there based on air passenger rights.

7. Final considerations

The AI OLGA system is a positive example of the application of principle number 5 of the European Ethical Charter on the use of artificial intelligence in judicial systems adopted by the CEPEJ⁶, the principle of 'under the control of the user', which implies the exclusion of a prescriptive approach and the guarantee that users are informed actors and have control over their choices.

During the development of the system, the active and continuous participation of judges in the design and definition of parameters was ensured.

Interference in the decision-making process is excluded. OLGA groups similar cases, extracts key parameters and organises documents. The judge – the 'human' – always verifies the facts, checks the results of the artificial intelligence and makes the final decision independently. This is the 'human-in-the-loop' principle in action.

Human control is significant in that the criteria and parameters are set by the judges and all the information provided by the system is transparently traceable and verifiable.

The quality and effectiveness of the system has earned OLGA a mention as a significant example in the Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions DigitalJustice@2030⁷, which "focuses on exploiting the transformative potential of AI, accelerating its adoption across all sectors to improve competitiveness and economic growth, as well as reducing administrative burdens" and aims to "promote and accelerate the use of AI in justice".

6. See www.coe.int/en/web/cepej/cepej-european-ethical-charter-on-the-use-of-artificial-intelligence-ai-in-judicial-systems-and-their-environment.

7. See https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/digitalisation-justice/communication-digitaljustice2030_en.