PROPOSED AMENDMENTS TO THE
FEDERAL RULES OF EVIDENCE[1]

1 **Rule 707.**   **Machine-Generated Evidence**

2   When machine-generated evidence is offered without

3 an expert witness and would be subject to Rule 702 if

4 testified to by a witness, the court may admit the evidence

5 only if it satisfies the requirements of Rule 702(a)-(d). This

6 rule does not apply to the output of simple scientific

7 instruments.

Committee Note

Expert testimony in modern trials increasingly relies on software- or other machine-based conveyances of information. Machine-generated evidence can involve the use of a computer-based process or system to make predictions or draw inferences from existing data. When a machine draws inferences and makes predictions, there are concerns about the reliability of that process, akin to the reliability concerns about expert witnesses. Problems include using the process for purposes that were not intended (function creep); analytical error or incompleteness; inaccuracy or bias built into the underlying data or formulas; and lack of interpretability of the machine's process. Where a testifying expert relies on such a method, that method – and the expert's reliance on it – will be scrutinized under

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[1] New material is underlined in red.

Rule 702. But if machine or software output is presented without the accompaniment of a human expert (for example through a witness who applied the program but knows little or nothing about its reliability), Rule 702 is not obviously applicable. Yet it cannot be that a proponent can evade the reliability requirements of Rule 702 by offering machine output directly, where the output would be subject to Rule 702 if rendered as an opinion by a human expert. Therefore, new Rule 707 provides that if machine output is offered without the accompaniment of an expert, and where the output would be treated as expert testimony if coming from a human expert, its admissibility is subject to the requirements of Rule 702(a)-(d).

The rule applies when machine-generated evidence is entered directly, but also when it is accompanied by lay testimony. For example, the technician who enters a question and prints out the answer might have no expertise on the validity of the output. Rule 707 would require the proponent to make the same kind of showing of reliability as would be required when an expert testifies on the basis of machine-generated information.

If the machine output is the equivalent of expert testimony, it is not enough that it is authenticated under Rule 902(13). That rule covers authenticity, but does not assure reliability under the preponderance of the evidence standard applicable to expert testimony.

The rule is not intended to encourage parties to opt for machine-generated evidence over live expert witnesses. Indeed the point of this rule is to provide reliability-based protections when a party chooses to proffer machine-generated evidence instead of a live expert.

It is anticipated that a Rule 707 analysis will usually involve the following, among other things:

• Considering whether the inputs into the process are sufficient for purposes of ensuring the validity of the resulting output. For example, the court should consider whether the training data for a machine learning process is sufficiently representative to render an accurate output for the population involved in the case at hand.

• Considering whether the process has been validated in circumstances sufficiently similar to the case at hand.

The final sentence of the rule is intended to give trial courts sufficient latitude to avoid unnecessary litigation over the output from simple scientific instruments that are relied upon in everyday life. Examples might include the results of a mercury-based thermometer, an electronic scale, or a battery-operated digital thermometer. Moreover, the rule does not apply when the court can take judicial notice that the machine output is reliable. *See* Rule 201.

The Rule 702(b) requirement of sufficient facts and data, as applied to machine-generated evidence, should focus on the information entered into the process or system that leads to the output offered into evidence.

Because Rule 707 applies the requirements of admitting expert testimony under Rule 702 to machine-generated output, the notice principles applicable to expert opinion testimony and records should be applied to output offered under this rule.