How experts can determine patent cases

Corinne Atton and **William Solander** explain the role of expert witnesses and how they may often be issue- or case-determinative in US patent litigation

Expert witnesses are omnipresent in US patent litigation. A key reason for this is the central role and function, in US patent law, of a person of ordinary skill in the art (POSA). Other reasons include the complexity of the science and technology that is litigated, and the fact that while many US judges are experienced in patent cases, they may not have scientific or technological expertise. Expert witnesses may provide the most important evidence of liability and damages at trial and their testimony may be case determinative. Even before trial, an excellent expert, under the careful guidance of attorneys, may help to secure significant successes. A favourable claim construction may be claim or defence determinative, and a compelling expert report may prompt settlement discussions. It is therefore essential that parties identify the elements of their case that may require expert testimony, and retain a full contingent of experts that will support their case as early as possible. Careful selection of experts, careful drafting, and rigorous preparation are key.

Under the Federal Rules of Evidence (FRE), an expert witness is a person whose "knowledge, skill, experience, training, or education" qualifies them to offer opinion-based testimony to help the judge or jury understand the relevant science or technology, and the issues in the case. Expert testimony is admissible in court if it is relevant and reliable in the sense that it is based on sound principles and methodology (*Daubert v Merrell Dow Pharm, Inc*, 509 US 579 (1993); *Kumho Tire Co Ltd v Carmichael*, 526 US 137 (1999)).

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Consulting and testifying experts

There are two types of experts in US litigation. The first, and ultimately the most important, type is testifying experts. Testifying experts prepare and disclose expert reports, they are put forward for deposition, and they may ultimately testify and be cross-examined in court. Testifying experts are typically scientists, engineers and economists.

Scientists and engineers generally educate the court as to the underlying science or technology, and may testify on a broad range of issues, including:

- the level of education, skill and experience of a POSA;
- what a POSA would have understood a patent claim term to mean as of the priority date of the claim;
- what is taught or disclosed in the prior art;
- whether a claim element is present or not in the prior art;
- whether the differences between the claimed invention and what is disclosed or taught in the prior art would have been obvious to a POSA as of the priority date of the patent claim;
- whether objective indicia of non-obviousness exist, such as long-felt but unmet need, failure of others, unexpected results, and the commercial success of the invention;
- whether the specification of the patent, when read in conjunction with an asserted patent claim, discloses to a POSA in "full, clear, concise, and exact terms" how to make and use the claimed invention, without undue experimentation; and
- whether a claim element is present in a particular product or process (35 USC §§103, 112; *In re Wands*, 858 F 2d 731, 737 (Fed Cir 1988)).

Economists may testify on issues such as market definition and market share, demand for the patented product, the acceptability of non-infringing alternatives, distribution channels, price elasticity, profitability, the value of the invention or the apportionment of the patented invention to the value of the product or process, and licence royalties for comparable products. Testifying experts may also offer ultimate opinions on whether a patent claim is invalid or is infringed, and on the measure of damages, or royalty that is "reasonable under the circumstances" (35 USC § 284; FRE 704).

Consulting (non-testifying) experts also perform an important role in US patent litigation. Consulting experts differ from testifying experts in that they are not expected to prepare or submit an expert report, or offer testimony at deposition or in court. Consulting experts – along with testifying experts – provide behind-the-scenes assistance, educating attorneys as to the relevant science or technology, evaluating claims and defences, locating and advising on the scope of prior art, assisting with infringement or invalidity contentions, and designing and explaining experiments. They may also assist with discovery, for example by advising on topics for interrogatories and depositions.

Different rules apply to testifying and consulting experts. One of the most important differences is that the identity, work product and opinions of consulting experts are generally shielded from discovery (Federal Rules of Civil Procedure (FRCP) 26). Documents, drafts and the workings of testifying experts that are prepared in anticipation of litigation or trial are also shielded from discovery, with three exceptions:

- communications concerning any facts or data provided by attorneys that the testifying expert considered in forming the opinions to be expressed;
- communications concerning any assumptions provided by attorneys that the testifying expert considered in forming the opinions to be expressed; and
- the compensation a testifying expert will receive for work on the case or testimony.

Necessary skills and qualities of an expert

Parties may consult a number of sources to identify potential experts. Client employees such as the inventors or in-house technicians may be knowledgeable about leading researchers in the field. Parties may also identify potential experts from leading academic institutions, from reviewing relevant publications, and from recommendations from colleagues and other experts in the field. Expert consulting firms may also be useful, for example, to identify damages experts.

Selecting the best experts requires careful consideration of professional and personal qualities, and practical realities. Professionally, an expert must have the education and experience required to offer sound, competent, and credible opinions. Ideally, they should be eminently qualified and respected in the relevant field. They must have a confident command of the relevant subject matter, and if expected to testify, must be an excellent teacher and an effective communicator. Testifying experts, in particular, must inspire confidence, perform well under pressure, and be able to withstand rigorous cross-examination.

Personally, an expert must be honest, sincere, fair and objective. They should have a good attitude and demeanour, be likeable, easy to work with and willing to listen. They must also have sufficient time to devote to the case, and should be easily accessible. If expected to testify they should also, ideally, have prior deposition or trial experience, and be legally and strategically savvy.

Conflicts of interest, problematic statements and communications with others

Conflicts of interest are a very important consideration when contacting potential experts, and must be thoroughly investigated before an expert is retained. Parties must confirm:

- that a potential expert has not been approached by any other party in the case;
- whether they have ever worked for, or advised any other party, and in what capacity; and
- whether they have previously testified, and if yes, whether they have ever had any testimony excluded by a court or arbitral panel.

Before an expert is retained, parties must understand how a potential expert views key issues in the case. Parties should also locate and review all prior testimony, mention in briefing and judgments, and all relevant publications to confirm that the expert has made no inconsistent or troublesome statements.

Regardless of whether an expert is expected to testify or not, their role, responsibilities and compensation should be clearly defined in a retention agreement. Experts should also be counselled to avoid interactions with each other, with client employees, with representatives from other parties, and with other experts retained by those parties, not least to avoid any potential breach of attorney-client privilege or work product protection.

Expert reports and depositions

The content and exchange of expert reports and expert-related discovery is governed by the FRCP. Under FRCP 26(a)(2), a party must disclose to all other parties the identity of any expert witness it may use at trial. This testifying expert must then prepare, sign and serve a written expert report which contains among other things:

- a complete statement of all of the opinions they intend to express at trial, and the basis and reasons for each opinion;
- the facts or data they considered when forming their opinions;
- any exhibits they intend to use to summarize or support their opinions;
- their qualifications, including a list of all of the publications they have authored in the last ten years;
- a list of all cases they have testified in by deposition or at trial in the last four years; and
- a statement of the compensation they will be paid for working on and testifying in the case.

While attorney assistance is permitted, it is imperative that experts draft, or at least review and heavily edit, their report so that they can truthfully claim authorship of it, and confirm that they understand and agree with everything stated within it.

In a typical patent case, expert reports are exchanged with the party bearing the burden of proof going first; the opposing expert then has the chance to respond; and the party bearing the burden then has the chance to reply. Experts who have submitted a report must then be offered for deposition, and may ultimately have to present and defend their opinions on cross-examination in court.

Expert declarations in PTAB proceedings

Just over four years ago, three new proceedings became available for trying certain patent matters before the Patent Trial and Appeal Board (PTAB) of the US Patent and Trademark Office. These proceedings – inter partes review, post grant review, and covered business method challenges – are essentially mini validity trials. Similar to litigation before district courts, the parties exchange briefing proposing claim constructions, defining the education and experience of a POSA, and explaining how the prior art does or does not render certain patent claims invalid. Both the petitioner and the patent owner can file expert declarations supporting their arguments, and limited discovery, including the deposition of expert witnesses, is permitted.

In these declarations, experts must "disclose the facts and/or data" which underlie their opinions, and if they rely "on a technical test or data from such a test", they must explain, among other things:

- why they are using that test or data;
- how the test was performed;
- how the data was generated;
- how the data is used to determine a value; and
- how the test is regarded in the relevant art.

The admissibility of expert testimony before PTAB and the court

The FRE govern the admissibility of evidence both before the PTAB and before the court. FRE 702 to 705 specifically concern expert testimony. Together these rules provide, among other things, that:

- an expert witness is a person whose "knowledge, skill, experience, training, or education" qualifies them to offer opinion-based testimony;
- an expert may only offer testimony if their "scientific, technical, or other specialized knowledge" will help the court "understand the evidence or to determine a fact in issue";
- testimony offered by an expert must be "based on sufficient facts or data," must be "the product of reliable principles and methods," and the expert must have reliably applied those "principles and methods to the facts of the case";
- experts may base their opinions on facts or data they "personally observed," or have "been made aware of";
- if a fact or data is of a kind that "experts in the particular field would reasonably rely on," opinions based on those facts or data are admissible regardless whether the underlying fact or data is itself admissible; and
- an opinion offered by an expert is "not objectionable just because it embraces an ultimate issue," for example, validity, infringement or the measure of damages (FRE 702-704).

Courts are also empowered under FRE 706 to appoint their own experts, but this provision has rarely been used in patent litigation.

The transcript from the deposition may then be used to attack the expert's credibility or to impeach them

The court's gatekeeper function

The jurisprudence of the Supreme Court in *Daubert* and *Kumho* counterbalances the relatively flexible rules summarised above. Together, these cases provide a framework empowering courts to evaluate the admissibility of expert testimony, if admissibility is challenged – which it frequently is in patent cases. The crux of the test set out in FRE 702 is relevancy and reliability. *Daubert* and *Kumho* hold that once the party proffering the expert testimony establishes its relevancy, the court then has broad discretion to determine whether this testimony is reliable by considering whether the principles or methods underlying the opinion are sound. The burden is on the party proffering the expert testimony to show by a preponderance of evidence that they are.

In the case of principles or methods underlying scientific opinion testimony, the court in *Daubert* set out the following non-exhaustive list of objective indicators of reliability:

- has the method the expert used been tested;
- is the method reliable, and what is the potential error rate;
- has the method been published or has it been the subject of peer review; and
- is the method generally accepted in the relevant scientific community?

In other words, are the principles or methods a product of the scientific method, and are they scientifically valid?

Preparing your expert is key to success

It is essential that testifying experts are rigorously prepared to offer and defend their opinions in deposition and at trial. Depositions offer the chance to probe an expert's opinions and determine the existence and quality of the facts and data relied upon. It is the foremost opportunity to work out how an expert's testimony fits into the parties' claims or defences, and to expose any inconsistencies between the expert's testimony and any prior testimony or publications. Opposing counsel will seek to advance their case by obtaining as many concessions from the expert as possible; boxing them into a limited scope of expertise, and locking them into particular opinions and bases for those opinions that will then limit their freedom to testify at trial. The transcript from the deposition may then be used to attack the expert's credibility or to impeach them.

It is therefore imperative that experts carefully review their report or declaration, and their deposition transcript, and be fully conversant with the facts and data, the documents they cite, and the opinions they offer. They should also understand the legal and strategic ramifications of their statements and opinions, and understand how their testimony fits in with other themes in the case, and with overall case strategy.

In sum, expert witnesses have a very important, often paramount, role in US patent litigation. Careful selection of experts, careful drafting of reports and thorough preparation for trial are key, and may be issue- and potentially case-determinative.

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