ADMISSIBILITY OF EXPERT TESTIMONY IN STATE COURTS

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I. INTRODUCTION

Given the technical and engineering complexity involved in the litigation of aviation lawsuits, the admission and presentation of testimony by experts in many different disciplines is essential. This is true for both plaintiffs and defendants, and the "battle of the experts" is thus an important part of almost every aviation trial, particularly one involving product liability issues. The admission of a defendant's expert testimony is crucial to the defense, of course, but the exclusion or limitation of a plaintiff's expert testimony can also be a highly effective tool. It is no wonder, then, that litigants prosecuting or defending aviation lawsuits regularly bring—and vigorously press—challenges to exclude expert testimony under the jurisdiction's applicable evidentiary rules.² While standards governing the admissibility of expert testimony are well-settled in federal courts, state courts often apply different tests for determining the admissibility of expert testimony. State court litigants should, therefore, be aware of the evidentiary standard that will apply to their case.

This article will briefly review the applicable standards controlling the admission and exclusion of expert testimony in federal court, and will then survey the current rules in the various state courts. The guidelines discussed in this article chiefly pertain to the subject of the reliability of the methodology supporting the

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For recent challenges to expert testimony in aviation cases, see Eberli v. Cirrus Design Corp., 615 F. Supp. 2d 1357 (S.D. Fla. 2009); In re Air Crash at Lexington, Ky., Aug. 27, 2006, 2009 WL 1764738 (E.D. Ky. 2009); In re Cessna 208 Series Aircraft Prods. Liab. Litig., 2009 WL 1357234, 2009 WL 2912611, 2009 WL 3756980, 2009 WL 1272139, 2009 WL 1649773, 2009 WL 3190458 (D. Kan. 2009).

proffered evidence. In addition, the qualifications of the proposed expert in the pertinent field of expertise, and the relevancy of the offered evidence to the case need be established by the proponent of expert evidence. These areas also offer opportunities for attacking the opponent's case by excluding the evidence on grounds of lack of expert qualification of the witness or lack of relevance of the testimony to the facts of the case.

II. THE ADMISSIBILITY OF EXPERT TESTIMONY: FROM Frye TO Daubert

In 1923, the U.S. District Court for the District of Columbia announced the *Frye* test, which required a proponent of scientific evidence to establish that the expert witness's theory and method were generally accepted within the relevant scientific community. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). In *Frye*, the court explained:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

Frye, 293 F. at 1014. Essentially, the Frye test involves a two-step analysis: (1) defining the relevant scientific community, and (2) evaluating the testimony and publications to determine the existence of a general consensus. At its core, the purpose of the Frye test is to ensure that "the scientific theory or discovery from

which an expert derives an opinion is reliable." *Hildwin v. State*, 951 So. 2d 784 (Fla. 2006).

Although criticized, the *Frye* test was adopted by many states and federal courts, remaining the dominant test until 1993, when the U.S. Supreme Court announced a new standard for determining the admissibility of scientific evidence in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). In *Daubert*, the Court reviewed the *Frye* test "in light of sharp divisions among the courts regarding the proper standard for the admission of expert testimony" and held that Federal Rule of Evidence 702 ("FRE 702") superseded the *Frye* test. *Id.* at 585–87.

Establishing a "gate keeping" role for the trial judge, the *Daubert* Court identified several factors to be considered in determining the admissibility of scientific evidence. *Id.* at 592-94. The Court retained "general acceptance" within the relevant scientific community as one factor, but it was no longer the exclusive test for determining admissibility; additional factors to be considered include whether the method can and has been tested, whether it has been subjected to peer review and publication, and the known or potential error rate. *Id.* at 593-94. Emphasizing the new standard's flexibility, the Court explained that "[i]ts overarching subject is the scientific validity and thus the evidentiary relevance and reliability of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate." *Id.* at 594-95.

Because the *Daubert* decision was based on the language of FRE 702, rather than constitutional grounds, states were not required to adopt its standard for the admissibility of expert testimony. Since *Daubert*, some states have continued to apply *Frye*, others have explicitly rejected *Frye* and adopted the more liberal *Daubert* standards or a similar test, and others still have adhered to their own unique tests.

III. A COMPARISON OF STATE APPROACHES

Fourteen states³ and the District of Columbia continue to apply Frye or a similar test. See Appendix A. State courts applying Frye have clarified their interpretations of the scope of the test. For instance, in State v. Gregory, the Washington Supreme Court explained that "[b]oth the scientific theory underlying the evidence and the technique or methodology used to implement it must be generally accepted in the scientific community for evidence to be admissible under Frve." 147 P.3d 1201, 1238 (Wash. 2006). Florida has explicitly distinguished the methods to be evaluated under Frve from the conclusions reached using such methods: "when the expert's opinion is based upon generally accepted scientific principles and methodology, it is not necessary that the expert's deductions based thereon and opinion also be generally accepted as well." U.S. Sugar Corp. v. Henson, 823 So. 2d 104, 109-10 (Fla. 2002). California's version of the *Frye* test even permits "general acceptance" to be established as a matter of law: "Once a published appellate decision has affirmed admission of a scientific technique, the technique's general acceptance [is] established as a matter of law. Further hearings on general acceptance [are] unnecessary 'at least until new evidence is presented reflecting a change in the attitude of the scientific community." People v. Doolin, 198 P.3d 11, 53 (Cal. 2009) (quoting People v. Kelly, 549 P.2d 1240, 1245 (Cal. 1976)).

Because Michigan applies a hybrid test which combines the *Frye* and *Daubert* tests for purposes of determining the admissibility of testimony based on science, Michigan is included both in the list of states applying *Frye* and in the list of states applying *Daubert*. *See Clerc v. Chippewa County War Mem'l Hosp.*, 729 N.W.2d 221, 221 (Mich. 2007) (explaining that "the court 'shall' consider all of the [*Daubert*] factors listed in MCL 600.2955(1). If applicable, the proponent must also satisfy the requirement of MCL 600.2955(2) to show that a novel methodology or form of scientific evidence has achieved general scientific acceptance among impartial and disinterested experts in the field.").

Thirty-five states⁴ have adopted *Daubert* or a similar test that treats the *Daubert* factors as "helpful" or "instructive." *See* Appendix B. States adopting *Daubert* often observe that their rules of evidence are "essentially identical" to the federal rules. See, e.g., State v. Brooks, 643 A.2d 226, 229 (Vt. 1993). Other states acknowledge that the relevant state rule of evidence was "amended explicitly to incorporate Daubert's standards of reliability." Gilbert v. DaimlerChrysler Corp., 685 N.W.2d 391, 408 (Mich. 2004). Some states decline to expressly adopt Daubert, but set forth similar standards. See, e.g., State v. Council, 515 S.E.2d 508 (S.C. 1999). Others simply acknowledge that Daubert is consistent with their existing interpretation of their rules of evidence. See, e.g., DiPetrillo v. Dow Chem. Co., 729 A.2d 677 (R.I. 1999); Nelson v. State, 628 A.2d 69 (Del. 1993); Hutchinson v. Amer. Family Mut. Ins. Co., 514 N.W.2d 882 (Iowa 1994). Even courts that decline to expressly adopt Daubert often recognize that the Daubert factors are useful to the trial courts. See, e.g., McDaniel v. CSX Transp., Inc., 955 S.W.2d 257, 265.

Two states, Virginia and Wisconsin, neither follow *Frye* nor *Daubert*, but have instead developed their own unique tests for determining the admissibility of expert testimony. *See* Appendix C. When presented with novel scientific evidence, Virginia vests broad discretion in the trial court to determine "whether the evidence is so inherently unreliable that a lay jury must be shielded from it, or whether it is of such character that the jury may safely be left to determine credibility for itself." *Spencer v. Commonwealth*, 393 S.E.2d 609, 621 (Va. 1990). Wisconsin, on the other hand, applies a relevancy test which does not require any reliability determination: "Scientific evidence is admissible under the relevancy test regardless of the scientific principle that underlies the evidence." *State v. Swope*, 762 N.W.2d 725 (Wis. Ct. App. 2008).

⁴ See, supra, note 2.

IV. CONCLUSION

While federal courts continue to apply the *Daubert* standard, state courts vary widely in their tests for determining the admissibility of expert testimony regarding scientific, technical, or other specialized knowledge. Due to the importance of expert testimony to the successful litigation of aviation cases, state court litigants should remain aware of the jurisdictional standard for admission of expert testimony that will apply to their case. Although both *Frye* and *Daubert* remain alive and well in state courts, litigants may still benefit from the advice of Judge Wolff of the Supreme Court of Missouri:

Forget *Frye*. Forget *Daubert*. Read the statute. Section 490.065 is written, conveniently, in English. It has 204 words. Those straightforward statutory words are all you really need to know about the admissibility of expert testimony in civil proceedings. Section 490.065 allows expert opinion testimony where "scientific, technical, or other specialized knowledge will assist the trier of fact"

State Bd. of Registration for Healing Arts v. McDonagh, 123 S.W.3d 146 (Mo. 2003) (en banc) (Wolff, J., concurring in part and dissenting in part).

APPENDIX A

STATES CONTINUING TO APPLY THE FRYE TEST

State	Post-Daubert Case Retaining Frye or Similar Test	
Alabama ⁵	Courtaulds Fibers, Inc. v. Long, 779 So. 2d 198 (Ala. 2000)	
Arizona	Logerquist v. McVey, 1 P.3d 113 (Ariz. 2000)	
California ⁶	People v. Leahy, 882 P.2d 321 (Cal. 1994)	
District of Columbia	Bahura v. S.E.W. Investors, 754 A.2d 928 (D.C. 2000)	
Florida	Flanagan v. State, 625 So. 2d 827 (Fla. 1993)	
Illinois	People v. Basler, 740 N.E.2d 1 (Ill. 2000)	
Kansas	Pullen v. West, 92 P.3d 584 (Kan. 2004)	
Maryland ⁷	Hutton v. State, 663 A.2d 1289 (Md. 1995)	
Michigan ⁸	Gilbert v. DaimlerChrysler Corp., 685 N.W.2d 391 (Mich. 2004)	
Minnesota	Goeb v. Tharaldson, 615 N.W.2d 800 (Minn. 2000)	
New Jersey ⁹	Hisenaj v. Kuehner, 942 A.2d 769 (N.J. 2008)	
New York	People v. Wesley, 633 N.E.2d 451 (N.Y. 1994)	
North Dakota	Fargo v. McLaughlin, 512 N.W.2d 700 (N.D. 1994) (continuing to apply Frye); but see State v. Hernandez, 707 N.W.2d 449, 461 (N.D. 2005) (Crothers, J., concurring) (urging the adoption of Daubert)	
Pennsylvania	Grady v. Frito-Lay, Inc., 839 A.2d 1038 (Pa. 2003)	
Washington	State v. Riker, 869 P.2d 43 (Wash. 1994)	

Alabama's version of the Frye test, known as the "Perry/Frye test," was adopted in Perry v. State, 586 So. 2d 242 (Ala. 1991).

⁶ California's slightly modified version of the *Frye* test, known as the "*Kelly/Frye* test," was adopted in *People v. Kelly*, 549 P.2d 1240 (Cal. 1976).

Maryland's version of the *Frye* test, known as the "*Frye-Reed* test," was adopted in *Reed v. State*, 391 A.2d 364 (Md. 1978).

Michigan's version of the Frye test, known as the "Davis-Frye test," was adopted in People v. Davis, 72 N.W.2d 269 (Mich. 1955).

New Jersey's admissibility test, which is similar to the *Frye* test, is discussed in *State v. Kellv*, 478 A.2d 364 (N.J. 1984).

$\label{eq:appendix} \textbf{APPENDIX B}$ STATES APPLYING DAUBERT OR A SIMILAR TEST

State	Test	Explanatory Case Law
Alaska	State v. Coon, 974 P.2d 386 (Alaska 1999) (adopting Daubert)	Samaniego v. City of Kodiak, 80 P.3d 216 (Alaska 2003) (identifying factors for relevance and reliability)
Arkansas	Farm Bureau Mut. Ins. Co. of Ark. V. Foote, 14 S.W.3d 512 (Ark. 2000) (adopting Daubert)	Graftenreed v. Seabaugh, 268 S.W.3d 905 (Ark. 2007) (Daubert factors only applicable to novel evidence, theory, or methodology)
Colorado	People v. Shreck, 22 P.3d 68 (Colo. 2001)	Shreck (trial court may, but need not, consider Daubert reliability factors)
Connecticut	State v. Porter, 698 A.2d 739 (Conn. 1997) (adopting Daubert)	Message Ctr. Mgmt., Inc. v. Shell Oil Prods. Co., 857 A.2d 936 (Conn. 2004) (identifying factors for reliability)
Delaware	Nelson v. State, 628 A.2d 69 (Del. 1993)	M.G. Bancorporation, Inc. v. Le Beau, 737 A.2d 513 (Del. 1999) (expanding the application of Daubert to technical and specialized knowledge); New Haverford P'ship v. Stroot, 2001 WL 493216 (Del. 2001) (trial court has flexibility in deciding whether Daubert reliability factors are appropriate)

State	Test	Explanatory Case Law
Georgia	Mason v. Home Depot USA, 658 S.E.2d 603 (Ga. 2008)	Mason (finding it "proper to consider and give weight to constructions placed on the federal rules by federal courts when applying or construing a statute based on those rules")
Hawaii	State v. Montalbo, 828 P.2d 1274 (Haw. 1992)	State v. Vliet, 19 P.3d 42 (Haw. 2001) (expressly declining to adopt Daubert, but finding "construction of the federal counterparts of the HRE by the federal courts [to be] instructive")
Idaho	State v. Merwin, 962 P.2d 1026 (Idaho 1998)	Weeks v. E. Idaho Health Servs., 153 P.3d 1180 (Idaho 2007) (explaining that Idaho has adopted some, but not all, Daubert standards)
Indiana	Steward v. State, 652 N.E.2d 490 (Ind. 1995)	McGrew v. State, 682 N.E.2d 1289 (Ind. 1997) (stating that "Daubert is "helpful, but not controlling")
Iowa	Ganrud v. Smith, 206 N.W.2d 311 (Iowa 1973)	In re Detention of Holtz, 653 N.W.2d (Iowa Ct. App. 2002) (identifying factors that trial courts may consider, at their discretion, in determining admissibility of expert testimony)

State	Test	Explanatory Case Law
Kentucky	Mitchell v. Commonwealth, 908 S.W.2d 100 (Ky. 1995) (adopting Daubert)	Toyota Motor Corp. v. Gregory, 136 S.W.3d 35 (Ky. 2004) (identifying a non-exclusive list of factors for determining admissibility of expert testimony)
Louisiana	State v. Foret, 628 So. 2d 1116 (La. 1993) (adopting Daubert)	State v. Williams, 974 So. 2d 157 (La. Ct. App. 2008) (identifying relevant factors for determining admissibility of expert testimony)
Maine	State v. Williams, 388 A.2d 500 (Me. 1978)	Searles v. Fleetwood Homes of Pa., Inc., 878 A.2d 509 (Me. 2005) (identifying reliability factors)
Massachusetts	Commonwealth v. Lanigan, 641 N.E.2d 1342 (Mass. 1994)	Commonwealth v. Patterson, 840 N.E.2d 12 (Mass. 2005) (general acceptance in the relevant community is, on its own, sufficient to establish reliability regardless of other Daubert factors)
Michigan	Gilbert v. DaimlerChrysler Corp., 685 N.W.2d 391 (Mich. 2004)	Edry v. Adelmani, N.W.2d (Mich. 2010) (acknowledging that Mich. R. Evid. 702 incorporates the Daubert standards of reliability)
Mississippi	Miss. Transp. Comm'n v. McLemore, 863 So. 2d 31 (Miss. 2003)	McLemore (stating that the Daubert factors are "helpful, not definitive")

State	Test	Explanatory Case Law
Missouri	State Bd. of Registration for Healing Arts v. McDonagh, 123 S.W.3d 146 (Mo. 2003) (en banc)	McDonagh (indicating that Daubert provides useful guidance in interpreting and applying section 490.065, but where the approaches differ, the statute's standard must govern)
Montana	State v. Moore, 885 P.2d 457 (Mont. 1994) (adopting Daubert)	Hulse v. State, Dept. of Justice, Motor Vehicle Div., 961 P.2d 75 (Mont. 1998) (Daubert standard should be limited to novel scientific evidence); State v. Price, 171 P.3d 293 (Mont. 2007) (identifying factors for determining admissibility of expert testimony)
Nebraska ¹⁰	Schafersman v. Agland Coop, 631 N.W.2d (862 (Neb. 2001) (adopting Daubert)	Carlson v. Okerstrom, 675 N.W.2d 89 (Neb. 2004) (identifying factors for determining admissibility of expert testimony)
Nevada	Krause Inc. v. Little, 34 P.3d 556 (Nev. 2001)	Higgs v. State, 222 P.3d 648 (Nev. 2010) (expressly rejecting <i>Daubert</i> and the "rigid application of its factors," but finding it to be persuasive authority)
New Hampshire	Baker Valley Lumber, Inc. v. Ingersoll-Rand Co., 813 A.2d 409 (N.H. 2002) (adopting Daubert)	Baker Valley Lumber (discussing reliability factors)

In Schafersman, Nebraska adopted the Daubert standard for trials commencing on or after October 1, 2001. For trials commencing prior to that date, Nebraska continued to apply the Frye test.

State	Test	Explanatory Case Law
New Mexico	State v. Alberico, 861 P.2d 192 (N.M. 1993)	Alberico (identifying factors for determining admissibility of expert testimony)
North Carolina	State v. Goode, 461 S.E.2d 631 (N.C. 1995)	Howerton v. Arai Helmet, Ltd., 597 S.E.2d 674 (N.C. 2004) (identifying reliability factors, but expressly rejecting Daubert); State v. Ward, S.E.2d (N.C. 2010) (stating that the Goode test does not require Daubert's thorough scrutiny of an expert's scientific method)
Ohio	Miller v. Bike Athletic Co., 687 N.E.2d 735 (Ohio 1998)	<i>Terry v. Caputo</i> , 875 N.E.2d 72 (Ohio 2007) (identifying reliability factors)
Oklahoma	Christian v. Gray, 65 P.3d 591 Okla. 2003) (adopting Daubert)	Christian (Daubert standard is applicable to all expert testimony—not just scientific testimony)
Oregon	State v. O'Key, 899 P.2d 663 (Or. 1995) (adopting Daubert in part)	State v. Southard, 218 P.3d 104 (Or. 2009) (identifying factors for determining admissibility of scientific evidence)
Rhode Island	State v. Wheeler, 496 A.2d 1382 (R.I. 1985)	In re Mackenzie C., 877 A.2d 674 (R.I. 2005) (identifying reliability factors)

State	Test	Explanatory Case Law
South Carolina	State v. Council, 515 S.E.2d 508 (S.C. 1999)	State v. White, 676 S.E.2d 684 (S.C. 2009) (extending courts' gate keeping role to nonscientific evidence to be admitted under S.C. R. Evid. 702)
South Dakota	State v. Hofer, 512 N.W.2d 482 (S.D. 1994) (adopting Daubert)	State v. Lemler, 774 N.W.2d 272 (S.D. 2009) (identifying reliability factors)
Tennessee	McDaniel v. CSX Transp., Inc., 955 S.W.2d 257 (Tenn. 1997)	McDaniel (indicating that Tenn. R. Evid. 702 encourages Tennessee "courts to take a more active role" in evaluating testimony; identifying reliability factors)
Texas	E.I. du Pont de Nemours & Co. v. Robinson, 923 S.W.2d 549 (Tex. 1995) (adopting Daubert)	Robinson (identifying reliability factors); Gammill v. Jack Williams Chevrolet, Inc., 972 S.W.2d 713 (Tex. 1998) (applying Tex. R. Evid. 702 to all expert testimony—not just scientific or technical testimony)
Utah	State v. Rimmasch, 775 P.2d 388 (Utah 1989)	State v. Crosby, 927 P.2d 638 (Utah 1996) (although similar to Daubert, the more restrictive Rimmasch approach is the proper admissibility standard in Utah)

State	Test	Explanatory Case Law
Vermont	State v. Brooks, 643 A.2d 226 (Vt. 1993) (adopting Daubert)	985 Assocs., Ltd. V. Daewoo Elecs. Amer., Inc.,945 A.2d 381 (Vt. 2008) ("the trial court's inquiry into expert testimony should primarily focus on excluding 'junk science'—because of its potential to confuse or mislead the trier of fact—rather than serving as a preliminary inquiry into the merits of the case")
West Virginia	Wilt v. Buracker, 443 S.E.2d 196 (W. Va. 1994) (adopting Daubert)	Watson v. INCO Alloys Int'l, Inc., 545 S.E.2d 294 (W. Va. 2001) (finding that courts should only apply the Wilt gatekeeper analysis to scientific, rather than technical, testimony)
Wyoming	Bunting v. Jamieson, 984 P.2d 467 (Wyo. 1999) (adopting Daubert)	Chapman v. State, 18 P.3d 1164 (Wyo. 2001) (explaining that if an expert's methodology is reliable, the court must then determine whether the testimony "fits" the facts of the case)

$\label{eq:appendix} \textbf{APPENDIX} \ \textbf{C}$ STATES FOLLOWING NEITHER FRYE NOR DAUBERT

State	Test	Rejection of Frye and Daubert
Virginia	Spencer v. Commonwealth, 393 S.E.2d 609 (Va. 1990)	O'Dell v. Commonwealth, 364 S.E.2d 491 (Va. 1988) (declining to adopt the Frye test); John v. Im, 559 S.E.2d 694 (Va. 2002) (leaving open for future consideration the question of whether Virginia should adopt the Daubert analysis)
Wisconsin	State v. Walstad, 351 N.W.2d 469 (Wis. 1984)	Watson v. State, 219 N.W.2d 398 (Wis. 1974) (rejecting the Frye test); State v. Fischer, 778 N.W.2d 629 (Wis. 2010) (declining to adopt a Daubert-like approach)