



Designation: E2324 – 04 (Reapproved 2017)

Standard Guide for PDD Paired Testing¹

This standard is issued under the fixed designation E2324; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This is a guide for the derivation of quantitative assessments of the credibility of proposed witness testimony through the application of established statistical principles to combinations of PDD examination results, and for the utilization of such assessments in the interests of justice (The Marin Protocol).

1.2 This guide describes circumstances in which proven statistical principles, applied to PDD results, can reliably quantify the trustworthiness or untrustworthiness of witness testimony, and

1.2.1 Delineates requirements necessary to effect the generation and practical use of such results, including:

1.2.1.1 Criteria regarding witnesses to be examined,

1.2.1.2 Criteria for determining facts upon which witnesses are to be examined,

1.2.1.3 Certification of examiners eligible to conduct examinations,

1.2.1.4 Combinations of results which support strong inferences, and

1.2.1.5 Appropriate uses to which strong inferences can be put.

1.3 Courts and others responsible for adjudicating questions of fact may choose whether and when to invoke paired PDD testing.

1.3.1 This guide expresses the rights and obligations of all participants in order to best serve the interests of justice when it is invoked.

1.3.2 Paired PDD testing must not be invoked in any case in any jurisdiction where to do so would violate the laws of that jurisdiction.

1.3.3 Adherence to these guidelines ensures that the conclusions reached will be valid.

1.4 This guide is directed to the proposed testimony of witnesses in criminal, civil, administrative and family court litigation, regarding factual claims, where

1.4.1 It is unlikely that the witnesses could be honestly mistaken, and

1.4.2 The facts in dispute are such that the case may hinge on whom the trier of fact believes; whenever,

1.4.3 Witnesses on opposite sides of a case offer contradictory testimony.

1.4.4 Two or more witnesses testifying for one side offer mutually corroborating testimony.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

E2031 [Practice for Quality Control of Psychophysiological Detection of Deception \(Polygraph\) Examinations](#)

3. Significance and Use

3.1 The goal of this guide is to reduce the incidence and impact of perjured testimony in administrative proceedings and in the criminal, civil and family court systems.

3.2 It is a mathematically established statistical principle that the probability of two independent events both occurring is the algebraic product of the probabilities of either event occurring alone.³

3.3 In litigation, the situation frequently arises:

3.3.1 That witnesses from opposite sides offer diametrically contradictory testimony regarding a fact or facts, such that one must almost certainly be lying, and

3.3.2 That witnesses from one side corroborate each other's testimony, such that either both must be telling the truth, or both must be lying.

3.4 Where both witnesses are examined regarding a fact:

¹ This guide is under the jurisdiction of ASTM Committee E52 on Forensic Psychophysiology and is the direct responsibility of Subcommittee E52.05 on Psychophysiological Detection of Deception (PDD).

Current edition approved Oct. 1, 2017. Published October 2017. Originally approved in 2004. Last previous edition approved in 2011 as E2324–04 (2011). DOI: 10.1520/E2324-04R17.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Press, S.J., *Bayesian Statistics: Principles, Models, and Applications*, John Wiley & Sons: New York, 1989.

3.4.1 By PDD examiners who have personally established that the level of accuracy they are able to achieve meets or exceeds requirements established by the courts of the jurisdiction.

3.4.2 The results when taken together support a strong common inference about the respective deceptiveness of the subjects.

3.4.3 If the minimum accuracy is set at 86 %, the probability that the inference will be wrong is less than 2.00 %. If the minimum accuracy is set at 90 %, the probability that the inference will be wrong is no higher than 1.00 %.

3.5 When more than two witnesses are examined by such examiners about a fact and all results support a common inference about the deceptiveness of the subjects regarding that fact, the probability that the inference will be wrong is even lower, in accordance with the statistical principle.

3.6 The validity of this guide rests on evidence that competent examiners are personally capable of achieving sufficient accuracy.

3.6.1 Determination of examiners' competence must be based not primarily on their training, years of experience, or the number of tests they have conducted, but on their personally demonstrated capability of the participating examiners.

3.7 The conditions and procedures outlined in this guide shall be known as the "Marin Protocol," for the originator.⁴

4. Procedures

4.1 A litigant should be entitled, by offering to have his or her own witness(es) undergo polygraph examinations by certified examiner(s) regarding potentially dispositive facts, to request a ruling from the presiding judicial authority that the witness(es) from the opposing side who intend to offer contradictory testimony be examined by certified examiner(s) concerning those facts.

4.1.1 A fact should be deemed "potentially dispositive" if a finding in regard to it, in either direction, could be decisive to the verdict. For example, where the fact at issue is whether an item of evidence had been fabricated, then even though a finding that it had not been fabricated might not be decisive, the fact at issue would nevertheless be "potentially dispositive" if a finding that the item was genuine could be decisive.

4.1.2 An otherwise potentially dispositive fact may be adjudged to be not potentially dispositive if supervening irrefragable evidence such as videotape or forensic materials is available regarding that fact.

4.2 A party's offer must specify the facts on which each witness is to be examined.

4.2.1 Where a litigant offers to have any witnesses examined about a fact, that offer must apply to all witnesses of the litigant intending to testify about that fact.

4.2.2 To satisfy the statistical probability requirements, and to ensure perjured testimony is not offered by secondary witnesses, all witnesses from the opposing side who intend to testify about that fact must either undergo PDD examination,

or refuse on the record to do so. The presiding officer should treat a refusal to undergo PDD examination in regard to a fact by any witness other than the defendant in a criminal proceeding as equivalent to a finding of deception.

4.2.3 Defendants in criminal proceedings should have the right to offer to undergo PDD examination pursuant to this protocol in regard to dispositive facts for the purpose of excluding, impeaching or rebutting testimony by prosecution witnesses regarding those facts, without compromising their rights under the Fifth and Fourteenth Amendments or being obliged themselves to later testify regarding that fact.

4.2.4 Neither a finding of deceptiveness nor the refusal of a witness to be examined should be used in any proceeding for any purpose other than exclusion, impeachment or rebuttal of testimony.

4.2.5 The challenging attorneys are responsible to specify the fact or facts about which witnesses are to be examined.

4.2.6 The judge or presiding officer should exercise reasonable discretion to reject a request regarding a fact on the grounds that the fact is not potentially dispositive, or is not likely to be known to more than one witness, such as a person's state of mind.

4.2.7 The PDD examiners are responsible for the formulation of the actual wording of the questions.

4.3 Deterrents to Abuse:

4.3.1 Where examinations administered pursuant to this guide result in a determination of deceptiveness regarding one party's testimony, and a determination of non-deceptiveness in regard to the opposing witness, that party whose witness has been found deceptive shall ordinarily bear the costs of the PDD examinations and all other costs incurred in the application of the guide to those witnesses.

4.3.2 It is important to discourage the frivolous invocation of this guide, particularly in furtherance of false accusations of police misconduct such as coercion of confessions or planting of evidence. The court or presiding officer should advise the offering (accusing) party that if he or she is found deceptive and the accused law enforcement officer is found non-deceptive, the frivolous accuser may be subject to sanctions including referral of the incident for possible prosecution.

4.3.3 If a witness is deemed unsuitable or non cooperative for PDD testing by the polygraph examiner the Marin Protocol shall be null and void and without effect. The testing examiner shall specify the reason(s) for a decision of unsuitability or non cooperation.

4.3.4 Except in extraordinary circumstances, witnesses examined pursuant to a request under this protocol should be examined by different examiners. Insofar as practical, the examinations should be conducted simultaneously.

4.3.5 To prevent conflicts of interest and minimize the occurrence or appearance of impropriety, when a party's witness has been found deceptive or a witness of the opponent has been found non-deceptive by examinations conducted pursuant to this guide, the party or the court may request that the relevant videotapes and all other work products be submitted for a quality assurance review in compliance with Practice E2031.

⁴ Marin, J., "He said / She said: Polygraph evidence in court," *Polygraph*, Vol 29, No. 4, 2000, pp. 299-304.