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Jorge L. Contreras

Pierre Larouche

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BALANCE AND STANDARDIZATION: IMPLICATIONS FOR COMPETITION AND ANTITRUST ANALYSIS

JUSTUS BARON
JORGE L. CONTRERAS
PIERRE LAROUCHE*

Most technical standards development organizations (SDOs) have adopted internal policies embodying “due process” criteria such as openness, balance of interests, consensus decision making, and appeals. Contrary to popular belief, efforts to balance different interest categories in SDO deliberations did not originate in response to antitrust requirements. Rather, to achieve broad acceptance and legitimacy of their standards, SDOs have long sought some degree of “balance of interests” among different stakeholder groups, typically encouraging active participation by product manufacturers, product users, and unaffiliated experts.¹ Accordingly, balance requirements are an accepted feature of SDO organization, and most stakeholders view them as desirable.²

* Justus Baron is a Senior Research Associate at Northwestern University Pritzker School of Law, Center on Law, Business, and Economics (CLBE). Baron’s Research at CLBE has benefited from financial support from Qualcomm and Intel. Jorge Contreras is a Presidential Scholar and Professor of Law at the University of Utah S.J. Quinney College of Law and the Director of its Program on Intellectual Property and Technology Law; he has served as legal counsel to the Internet Engineering Task Force (IETF), a group discussed in this article, and as a member of both ASTM International and the Institute of Electrical and Electronics Engineers (IEEE), also discussed herein. Pierre Larouche is Associate Dean and Professor of Law and Innovation at the Faculty of Law, Université de Montréal. The authors thank Igor Nikolic and the other participants at the European University Institute, Conversation on Patents, Innovation and Competition, September 2020, for their valuable feedback and comments on an earlier version of this article. A more comprehensive history of the development of SDO balance requirements in the United States and European Union can be found in Justus Baron, Jorge L. Contreras & Pierre Larouche, *Balance Requirements for Standards Development Organizations: A Historical, Legal and Institutional Assessment* (Univ. of Utah College of Law Research Paper No. 430, Jan. 2021).

¹ JOANNE YATES & CRAIG N. MURPHY, *ENGINEERING RULES: GLOBAL STANDARD SETTING SINCE 1880* at 9, 194 (2019).

² See Justus Baron, Jorge Contreras, Martin Husovec & Pierre Larouche, *Making the Rules: The Governance of Standard Development Organizations and Their Policies on Intellectual Property Rights* 119 (Joint Res. Ctr. Science for Pol’y Report EUR 29655 EN, Nikolaus Thumm ed., Mar. 2019) [hereinafter JRC Report] (89% of surveyed stakeholders believed that “SDOs should ensure balance among different types of stakeholders when considering a significant new policy or policy change.”).

Similarly, a significant number of public regulations list balance among the procedural features of standards development that SDOs are expected to follow, e.g., for their standards to qualify for government use or to be regarded as authoritative expressions of the state of the art.

Until recently, relatively little scholarly research has considered the history, scope, and interpretation of SDO balance requirements. A series of recent events and disputes, however, has focused attention on this understudied area of SDO governance and policy, particularly as it pertains to policies concerning intellectual property rights (IPRs). The recent focus on balance requirements is rooted in a growing number of conflicts between firms (“patent-centric” firms) that seek to earn royalty revenue from licensing patents that are essential to an SDO’s standards (standards-essential patents or SEPs) and firms that primarily seek to earn revenue from sales of standardized products, faster time to market, and the broad availability of compatible products (“product-centric” firms).³

For example, the revision of the patent policy of the Institute of Electrical and Electronics Engineers (IEEE) in 2015 sparked allegations of imbalance.⁴ Both the policy itself and the decision-making process that led to its adoption were criticized as being unbalanced to the detriment of patent-centric firms. The ensuing public debate involved multiple SDO participants, SDOs, and the U.S. Department of Justice Antitrust Division.⁵

The DOJ also took an active interest in balance at the American National Standards Institute (ANSI), and in 2018 sent a letter urging ANSI “to have balanced representation in its decisional bodies” tasked with proposing changes to the implementation of ANSI’s patent policy.⁶

In 2018, a software testing company, NSS Laboratories, filed an antitrust complaint against various software vendors and the Antimalware Testing Standards Organization (AMTSO), alleging that AMTSO’s standards devel-

³ See Jorge L. Contreras, *Technical Standards and Ex Ante Disclosure: Results and Analysis of an Empirical Study*, 53 JURIMETRICS J. 163, 206–07 (2013) (introducing terminology and noting that many product-centric firms also hold substantial patent portfolios).

⁴ See, e.g., J. Gregory Sidak, *Testing for Bias to Suppress Royalties for Standard-Essential Patents*, 1 CRITERION J. INNOVATION 301 (2016); Nicolo Zingales & Olya Kanevskaia, *The IEEE-SA Patent Policy Update Under the Lens of EU Competition Law*, 12 EUR. COMPETITION J. 195 (2016).

⁵ See *infra* Part II.N.

⁶ Letter from Andrew C. Finch, Principal Dep. Ass’t Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, to Patricia Griffin, Vice President & Gen. Counsel, Am. Nat’l Standards Inst., at 1 (Mar. 7, 2018) [hereinafter DOJ ANSI Letter].

opment processes and standards were biased toward the interests of software vendors, to the detriment of software testing companies.⁷

And in 2019, the DOJ concluded an investigation of the standards development processes of the GSM Association (GSMA), which establishes standards for mobile network operators, and issued a favorable business review letter after GSMA made significant changes to its processes.⁸ These changes addressed the DOJ's concerns that GSMA's previous processes had unfairly favored the interests of telecommunications network operators over the interests of other companies, such as vendors of telecommunications devices and equipment.

In each of these cases, it was suggested that SDOs may have violated (or were at risk of violating) antitrust laws by reaching decisions through processes that insufficiently balanced the interests of different commercial groups. But what does “balance of interests” mean in an SDO comprised of self-selected volunteer participants—both individuals and organizations—and when does absence of such balance constitute a violation of the antitrust laws?

The legality of joint standards development activities by competing firms under the antitrust laws hinges on weighing the pro- and anticompetitive effects that they produce. Following recognized and accepted standardization processes alone may not immunize an SDO and its members from antitrust liability,⁹ and failure to abide by such processes alone does not necessarily constitute a violation of antitrust laws.¹⁰ Nevertheless, the weighing of pro-

⁷ Complaint, *NSS Labs, Inc. v. CrowdStrike, Inc.*, Case No. 3:18-cv-05711 (N.D. Cal. filed Sept. 18, 2018).

⁸ See Letter from Makan Delrahim, Ass't Att'y Gen., Antitrust Div., U.S. Dep't of Justice, to Timothy Cornell, Esq., Clifford Chance US LLP, at 4 (Nov. 27, 2019) [hereinafter DOJ GSMA Letter].

⁹ James Anton and Dennis Yao, for example, argue that, while “procedural considerations have played a primary role in the antitrust analysis of standard setting,” standardization processes following due process are capable of producing anticompetitive effects. In their view, the enforcement of antitrust laws with respect to standards development should not be limited to assessing standardization procedures but should also assess “the substantive reasonable basis for a standard.” James J. Anton & Dennis A. Yao, *Standard-Setting Consortia, Antitrust, and High-Technology Industries*, 64 ANTITRUST L.J. 247, 248 (1995). With respect to the determination of patent policies, Melamed and Shapiro argue that SDO deliberations—irrespective of the voting process—may result in “highly undesirable outcomes,” and that “SSO procedures and FRAND rules should be evaluated based on whether they lead to reasonable SEP royalties.” A. Douglas Melamed & Carl Shapiro, *How Antitrust Law Can Make FRAND Commitments More Effective*, 127 YALE L.J. 2110 (2017). They argue that the SDO and its members may face antitrust liability for SDO rules that are insufficient to curb anticompetitive conduct by SEP holders. *Id.*

¹⁰ See AM. BAR ASS'N, HANDBOOK OF ANTITRUST ASPECTS OF STANDARD SETTING 59 (2d ed. 2011) (“[C]ourts emphasize that the failure to comply with strict due process is not enough, by itself, to demonstrate that a product certification decision violates the antitrust laws.”). In fact, U.S. courts have traditionally been reluctant to scrutinize too closely the specific procedural requirements of a given organization. See, e.g., *Consol. Metal Prods. v. Am. Petroleum Inst.*, 846 F.2d 284, 297 (5th Cir. 1988) (stating that federal courts should not “become boards of

and anticompetitive effects is difficult, and in practice the general procedural quality of standards development processes has played an important role in indicating whether such processes are procompetitive. That is, in cases of alleged anticompetitive conduct by SDO participants, courts and enforcement agencies have taken note of SDOs' emphasis on balance among participants in standard-setting activities and viewed this balance as a procompetitive feature.¹¹ Legislation, general guidance by antitrust authorities, and court decisions thus reflect a presumption that standards development processes that follow certain due process principles—including balance—are less likely to create anticompetitive effects.

The existing case law and guidance, however, offer little assistance in understanding precisely how these due process principles translate into specific antitrust requirements that apply to standards development. Courts have not fully elucidated the conditions under which imbalances in standards development processes may constitute antitrust violations. Nor have they ruled on the specific balance requirements that SDOs must satisfy to qualify for certain protections from antitrust liability. Given the absence of specific guidance on the meaning and implications of balance requirements for SDOs under the antitrust laws, it is necessary to review the development of the laws, regulations, and institutional norms that have shaped balance requirements and their application by different SDOs more generally.

Accordingly, we begin our analysis with an extensive survey of the evolution of balance requirements. First, we describe the origins and evolution of balance requirements at the international level, leading to their inclusion in WTO and ISO/IEC instruments (Part I). In Part II, we describe how balance requirements went from a feature of SDOs to an element of rule of reason analysis under U.S. antitrust law, finding their way into related statutes as well. In Part III, we chart the parallel path of balance requirements in the European Union, from national SDO features to components of EU standardi-

automatic review for trade association standards committees, product testing services, and countless other business transactions"); *Jessup v. Am. Kennel Club*, 61 F. Supp. 2d 5, 12 (S.D.N.Y. 1999) ("[T]he antitrust laws are not intended as a device to review the details of parliamentary procedure."). In its Horizontal Guidelines of 2011, the European Commission similarly sees limited antitrust concerns with standardization agreements, provided that there is effective competition between a number of voluntary standards. Eur. Comm'n, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements, 2011 O.J. (C 11) 1, ¶ 277. Procedural safeguards are only relevant for the antitrust analysis of standard-setting agreements capable of creating market power, *id.* ¶ 278, and the non-fulfillment of any of these principles alone should not lead to a presumption of a restriction of competition, *id.* ¶ 279.

¹¹ See *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 506–07 (1988) ("[P]rivate standard-setting by associations comprising firms with horizontal and vertical business relations is permitted at all under the antitrust laws only on the understanding that it will be conducted in a nonpartisan manner offering procompetitive benefits.").

zation policy and eventually factors in EU competition law analysis. Part IV explores the different notions of balance that have evolved and their application to antitrust analysis.

I. ORIGINS AND EVOLUTION OF BALANCE REQUIREMENTS IN INTERNATIONAL STANDARDIZATION

A. EARLY INTERNATIONAL STANDARDIZATION ORGANIZATIONS

The earliest technical standardization organizations in Europe and the United States arose at the end of the 19th century from private-sector initiatives.¹² This early standardization movement was largely independent of government control. Lacking formal legal means of enforcing compliance with their standards, early advocates of international standardization saw the need to involve both the manufacturers of standardized goods and their customers in standardization, to ensure that standards responded to the interests of both manufacturers and their customers. As a result, when the International Association for Testing Materials (IATM)—the first international association created solely for setting voluntary industry standards—was created in 1898, it established a policy “that its Technical Committees should be nearly equally divided between producers and consumers.”¹³ IATM’s policies created a widely observed precedent and influenced practices in international standards organizations, as well as national and regional organizations in the United States and Europe.¹⁴ We refer to these early SDO requirements to balance the interests of different groups, most notably producers and users of the standardized goods, as “traditional” balance requirements.

One of the oldest international standards organization still in existence, the International Electrotechnical Commission (IEC), was formed in 1906.¹⁵ It appears that, at the founding conference of the IEC, debate arose as to membership, and delegates chose to expand beyond professional engineers to include representatives of manufacturers in order to ensure the success of standardization efforts.¹⁶ The need for a balanced membership was therefore very much on the minds of the national professional electrical engineering associations as they created the IEC.

¹² For an overview of the historical development of international standardization, see YATES & MURPHY, *supra* note 1.

¹³ *Id.* at 43 (quoting *Minutes of the Meeting of the Executive Committee*, 1 PROC. AM. SECTION INT’L SOC’Y TESTING & MATERIALS 76 (1900)).

¹⁴ *See id.* at 45 (“[S]imilar membership policies would be adopted by other standardizing bodies subsequently, as would the policies around balance of producers and consumers of materials.”).

¹⁵ *Id.* at 66–67.

¹⁶ *Id.* at 69–71.

B. BALANCE REQUIREMENTS AND THE WTO TBT AGREEMENT

Despite their origins in international standardization, balance-of-interests requirements in standards development subsequently evolved at the national and regional levels. (See Parts III and IV.) One reason for this shift is that there are few regulatory instruments at the international level capable of imposing procedural requirements on SDOs. One exception is the World Trade Organization's (WTO) Agreement on Technical Barriers to Trade (the TBT Agreement) adopted in 1994,¹⁷ which includes an annex titled "Code of Good Practice for the Preparation, Adoption, and Application of Standards."¹⁸

The Code of Good Practice focuses on aspects of standards development that are directly relevant to international trade. It does not provide a balance-of-interests requirement or comparable process principles. In 2000, however, the Code was supplemented by a decision of the Committee on Technical Barriers to Trade, which invites SDOs to adopt "procedures for soliciting input from a wide range of interests," and notes that "[b]odies operating with open, impartial and transparent procedures, that afford[] an opportunity for consensus among all interested parties" are more likely to develop effective standards that do not create unnecessary obstacles to trade.¹⁹ This decision emphasizes the impartiality of the standardization process and its openness to a wide range of interests, but does not require SDOs to balance representation of different interest categories.

Additionally, in 1994—concurrently with the negotiation of the WTO Code of Good Practice—the IEC and the International Organization for Standardization (ISO) jointly developed Guide 59, their own "Code of Good Practice for Standardization."²⁰ The membership of ISO and IEC includes the National Standards Bodies (NSB) of a large number of countries, and in many countries these bodies play a predominant role in standardization. Guide 59 may thus be seen as an attempt by SDOs to contribute to discussions taking place within the WTO by providing guidance on internationally respected standardization principles.

In particular, Guide 59 stipulates that the standardization processes of NSBs and other standards organizations at the national level "should provide

¹⁷ Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 120.

¹⁸ *Id.* Annex 3, 1867 U.N.T.S. at 138 [hereinafter TBT Code of Good Practice].

¹⁹ Comm. on Tech. Barriers to Trade, *Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade*, G/TBT/9, Annex 4 (Nov. 13, 2000) (Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5, and Annex 3 of the Agreement).

²⁰ Int'l Org. for Standardization & Int'l Electrotechnical Comm'n, Guide 59: ISO and IEC Recommended Practices for Standardization by National Bodies (1994).

for balanced representation of interest categories such as producers, buyers, consumers, etc.”²¹ Similar balance requirements apply to NSBs representing national interests in regional and international standardization. In a 2019 revision to Guide 59, the requirement to balance representation of different interest categories is replaced with a less stringent requirement of “keeping an impartial and independent position by providing the opportunity for representation by an appropriate balance of interests.”²²

The revised language brings Guide 59 more closely in tune with the TBT Committee Decision of 2000 and its call for impartiality and openness to participation by a wide range of interests (as opposed to ensuring balanced representation of different categories).²³ Furthermore, it appears to reflect experience with balance requirements from standardization practice. More detailed guidance by ISO to NSBs, also issued in 2019, states that “Quotas shall not be used, because it’s not possible to make general rules for stakeholder balance, due to diversity of technical sectors.”²⁴ Through the interpretations of the TBT Committee Decision and the revised Guide 59, the concept of balance of interests is thus linked to keeping the standardization process open to a variety of interests.

Conversely, the notion of balance is included in authoritative international interpretations of “open standards.” For example, the International Telecommunications Union (ITU), an intergovernmental standards organization, defined “open standards” in 2005 in the context of discussions regarding IPRs. One element of this definition is that the standardization process should be “reasonably balanced” to ensure “that the process is not dominated by any one interest group.”²⁵

²¹ *Id.* § 6.5.

²² Int’l Org. for Standardization & Int’l Electrotechnical Comm’n, Guide 59: ISO and IEC Recommended Practices for Standardization by National Bodies § 4.4.5 (2019).

²³ The intent to better align Guide 59 with WTO principles is stated in the foreword to the revised Guide. *Id.* at v. With the revision, a “scope” has also been added to Guide 59, stating that the Guide “provides recommended standardization practices that are intended to support the application” of the TBT Code of Good Practice and the TBT Committee Decision of 2000.

²⁴ INT’L ORG. FOR STANDARDIZATION, GUIDANCE FOR ISO NATIONAL STANDARDS BODIES: ENGAGING STAKEHOLDERS AND BUILDING CONSENSUS (2019), www.iso.org/files/live/sites/isoorg/files/store/en/PUB100269.pdf. The guidance nonetheless does not abandon the principle of balanced representation: “Working group (WG) convenors are also responsible for ensuring a balance of interest and representation of all relevant stakeholder categories in their WGs, and must issue a new call for experts in case of imbalance.” *Id.* at 59. Balance of interests should be assessed with respect to appropriately defined interest “categories,” such as industry and commerce, government, consumers, labor, and non-governmental organizations.

²⁵ Int’l Telecomm. Union, Definition of Open Standards (Nov. 11, 2005), www.itu.int/en/ITU-T/ipr/Pages/open.aspx (definition developed by IPR Ad Hoc Group and endorsed by the Telecommunications Standardization Advisory Group).

II. EVOLUTION OF SDO BALANCE REQUIREMENTS IN THE UNITED STATES

A. EARLY SDO POLICIES—TRADITIONAL BALANCE REQUIREMENTS (PRE-1960)

In line with the example set by international organizations discussed in Part I, above, many early 20th century American standards organizations sought to balance the interests of manufacturers, users, and other interest groups.²⁶ While in many cases such balance was achieved informally by working group chairs and other SDO leaders, more formal institutional requirements soon emerged. Beginning in 1920, the American Engineering Standards Committee (AESC)²⁷ required its Sectional Committees to maintain a balance of “producers, consumers, and general interests.”²⁸ According to historian Andrew Russell, “Much more than a trivial bureaucratic detail, the mandate for balance between producers, consumers, and general interests was the foundational principle and essence of the enterprise.”²⁹

Over time, SDOs such as ASTM International adopted formal policies requiring that technical committees have minimum, numerically defined levels of representation from specified stakeholder categories (usually producers; “consumers,” i.e., users;³⁰ and general interest).³¹ The International Code Council (ICC) identifies nine different interest categories and prohibits members from any single category from forming more than one-third of the membership of any given standards committee.³² We refer to these numerical category-balancing requirements as “quotas.”

²⁶ YATES & MURPHY, *supra* note 1, at 34, 39, & 50.

²⁷ AESC was the precursor to today’s American National Standards Institute (ANSI).

²⁸ AESC, ANNUAL REPORT 8 (1920), *cited in* ANDREW L. RUSSELL, OPEN STANDARDS AND THE DIGITAL AGE: HISTORY, IDEOLOGY, AND NETWORKS 71 (2014).

²⁹ *Id.*

³⁰ Early references to “producers and consumers” generally designate the opposing interests of two different groups of companies, namely the manufacturers and the industrial/commercial users of standardized goods, such as steelmakers and railways (e.g., RUSSELL, *supra* note 28, at 54; YATES & MURPHY, *supra* note 1, at 50). Reference to individual consumers is a more recent phenomenon.

³¹ ASTM Int’l, Regulations Governing ASTM Technical Committees § 3.1.1 (2018) (defining “balance” as occurring “when the combined number of voting user, consumer, and general interest members equals or exceeds the number of voting producer members”); *id.* § 3.2.1 (requiring that “[b]alance must be achieved before any standards are brought before a classified subcommittee or main committee for ballot”); *see also* Robert W. Hamilton, *The Role of Nongovernmental Standards in the Development of Mandatory Federal Standards Affecting Safety or Health*, 56 TEX. L. REV. 1329, 1352–55 (1978) (observations of ASTM’s mandatory balance rules in practice).

³² *See* Int’l Code Council, *Standards Development Interest Categories*, www.iccsafe.org/membership/councils-committees/standards-development-interest-categories/ (identifying nine interest categories: manufacturer, builder, standards promulgator/testing laboratory, user, utility, consumer, public segment, government regulator, and insurance).

B. TOWARD A U.S. NATIONAL STANDARDIZATION POLICY (1960s–1970s)

During the 1960s and 1970s, in parallel with the creation of new regulatory agencies such as the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA), government reliance on environmental, health and safety standards developed by SDOs increased significantly in the United States.³³ At the same time, industry-dominated SDOs were subject to criticism by consumer advocates.³⁴ Representatives of small businesses similarly complained that standardization processes were imbalanced and dominated by the interests of large corporations.³⁵ In this context, both representatives of private SDOs and their critics called for a national standardization policy that would safeguard all interests affected by proposed standards.³⁶ In parallel, U.S. officials were pressing for inclusion of a standards code in the ongoing negotiations of the Tokyo Round of the GATT, further increasing the perceived need for a formal U.S. standardization policy that could be used as a model in international negotiations.³⁷

During this period, there were several attempts to expand government control of standardization in the United States. Unsuccessful legislative proposals of the time aimed to create an accreditation program for SDOs under the auspices of the Federal Trade Commission, creating uniform standards-development procedures and assuring “that the membership of standards-development committees be balanced so as to include and to insure effective representation of all affected interests (e.g., consumers, small business concerns, users, manufacturers, suppliers, distributors, employees, environmental and conservation organizations, state and local procurement and code officials, labor, etc.).”³⁸

In 1978, the FTC issued a proposed rule and staff report that found that “standards development and certification activities have frequently caused or contributed to substantial consumer and competitive injuries.”³⁹ Many of these concerns originated in insufficiently protective standardization processes: “Standards development and certification organizations have not adequately protected all of the interests affected by their activities. The procedures are

³³ U.S. CONG., OFFICE OF TECH. ASSESSMENT, *GLOBAL STANDARDS: BUILDING BLOCKS FOR THE FUTURE*, TCT-512, at 55 (Mar. 1992) [hereinafter *OTA 1992 REPORT*].

³⁴ Voluntary Standards Accreditation Act: Hearings on S. 825, Before the Subcomm. on Antitrust & Monopoly of the S. Comm. on the Judiciary, 95th Cong., 1st Sess. (1977) (testimony of Ralph Nader) (cited in *OTA 1992 REPORT*, supra note 33, at 54).

³⁵ H.R. REP. NO. 90-1985, at 180 (1968).

³⁶ See William T. Cavanaugh, *Needed: A National Standards Policy*, *ASTM STANDARDIZATION NEWS*, June 1977, at 12.

³⁷ YATES & MURPHY, supra note 1, at 194–95.

³⁸ E.g., Voluntary Standards Accreditation Act, S. 825 & H.R. 8184, 95th Cong. § 102(b)(1)(c) (1977) (bill that never made it past the committee stage).

³⁹ Fed. Trade Comm’n, *Standards and Certification: Proposed Rule and Staff Report 3* (1978).

capable of being, and have been, manipulated by large or established firms at the expense of consumers, small firms, new entrants, and others.”⁴⁰

In its analysis, the FTC distinguished between two distinct violations of proper standardization process: “Dominant Firm Control,” in which a single firm or group of firms obtains an unfair advantage through a biased standardization process, and “General Industry Control,” in which “industry generally has greater influence in the development process than other groups, so standards may be aimed at furthering industry interests.”⁴¹ In the FTC’s view, existing SDO balance requirements were insufficient to remedy this situation: “[A]lthough competing interests purportedly receive balanced representation, certain interests are presumed to adequately represent other interests. For example, consumers have been presumed to be adequately represented by government officials, engineers, scientists, or academics”—a presumption that the FTC clearly believed to be erroneous.⁴²

To remedy these issues, the FTC’s 1978 proposed rule would have treated the development of standards in violation of clearly defined standardization process principles as “an unfair method of competition as well as an unfair or deceptive act or practice” (i.e., behavior that the FTC has the authority to prosecute under Section 5 of the FTC Act).⁴³ In particular, the report recommends that standards developers “provide to all persons equal opportunity to participate in all phases of all standards proceedings.”⁴⁴ The FTC staff thus appeared to approve of an approach to standards development rooted in openness, while not explicitly requiring balance and casting doubt on the effectiveness of formal “classification schemes” intended to mandate balance (e.g., the quota requirements imposed by ASTM).⁴⁵ Nevertheless, in cases in which unrestricted participation would become impractical, “the standards developer may identify classes of persons with the same or similar interests in the proceeding and select a representative or representatives to exercise attendance and oral participation rights on behalf of each such class.”⁴⁶

The proposed Voluntary Standards Accreditation Act and the FTC’s 1978 Staff Report were strongly opposed by many industry representatives, and particularly standards organizations.⁴⁷

⁴⁰ *Id.* at 5.

⁴¹ *Id.* at 125.

⁴² *Id.* at 128.

⁴³ *Id.* at 289.

⁴⁴ *Id.* at 318.

⁴⁵ *Id.* at 328.

⁴⁶ Fed. Trade Comm’n, Standards and Certification; Proposed Trade Regulation Rule, 43 Fed. Reg. 57,269 (Dec. 7, 1978).

⁴⁷ First Session on Oversight to Examine the Enforcement and Administrative Authority of the FTC to Regulate Unfair and Deceptive Trade Practices: Hearings Before the Subcomm. for Con-

C. BALANCE REQUIREMENTS AT ANSI (1960s–1970s)

ANSI, formed in 1916, serves as the accreditation body for SDOs that are developers of American National Standards.⁴⁸ While ANSI accredits more than 200 individual SDOs, not all U.S.-based SDOs are ANSI-accredited (notable omissions including IETF and W3C), and only a few foreign-based SDOs are accredited.⁴⁹

Concerns over the representation of consumers and other societal groups were shared by ANSI and many ANSI-accredited SDOs.⁵⁰ In response, these SDOs implemented a variety of programs intended to increase the voice of consumers in standardization activities, ranging from informal “consumer sounding boards” to direct participation by technically qualified consumer representatives on SDO technical committees.⁵¹ In 1967, ANSI created a consumer council to review and comment upon standards affecting consumers prior to their approval.⁵²

In addition to outreach to underrepresented groups, in 1974 ANSI significantly expanded its oversight of due process principles in the development of American National Standards when it first issued its *Procedures for Management and Coordination of American National Standards*.⁵³ Section 4.8.3 of the *Procedures* formulated explicit requirements to balance the composition of American National Standards committees among representatives of different interest groups. Notably, the *Procedures* distinguished between product and safety standards committees. Participants in product standards committees were classified as representing producer, retailer, or user interests, as well as the general interest (any party having an interest other than those covered by the other categories). Safety standards committees were required to classify participants into a significantly larger set of interest categories, also including employers, employees, government, and consumers, among others. In addi-

sumers of the S. Comm. on Commerce, Science, & Transp., 96th Cong. 289 (1979). ANSI even filed a lawsuit opposing adoption of the FTC’s proposed rules. See Complaint, Am. Nat’l Standards Inst. v. FTC, Civ. No. 79-1275 (D.D.C. May 9, 1979).

⁴⁸ Jorge L. Contreras, *Origins of FRAND Licensing Commitments in the United States and Europe*, in THE CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS 149, 162–63 (Jorge L. Contreras ed., 2017).

⁴⁹ ANSI, ANSI Membership Roster, myaccount.ansi.org/Membership/membershipRoster.aspx.

⁵⁰ Hamilton, *supra* note 31, at 1383–86.

⁵¹ *Id.* at 1384.

⁵² *Id.* at 1385. The ANSI Consumer Interest Forum, which exists today, is the successor to the Consumer Council. See ANSI, Consumer Interest Forum (CIF), www.ansi.org/consumer_affairs/cic?menuid=5#overview.

⁵³ ANSI, *Procedures for Management and Coordination of American National Standards* (1974) [hereinafter ANSI *Procedures* (1974)]. Before it issued the *Procedures*, Professor Hamilton observes that ANSI “made no systematic attempt to ensure compliance with [its] procedural requirements.” Hamilton, *supra* note 31, at 1346.

tion, the balance requirement for safety standards committees was more stringent, requiring that no stakeholder category account for more than one third of a committee's members. This is in contrast to product standards committees, in which no more than a majority of members could be from the same stakeholder category. This distinction suggests that an imbalance between industry and other interests (such as consumer and employee interests) was seen as less acceptable in the case of safety standards than product standards.

D. BALANCE AND OMB CIRCULAR A-119 (1976–1980)

In January 1980, after four years of discussion, the White House Office of Management and Budget (OMB) released a memorandum to executive agencies known as OMB Circular A-119.⁵⁴ As originally adopted, Circular A-119 established a federal policy favoring the use of privately developed voluntary standards in federal procurement activities. For purposes of the 1980 Circular, “voluntary standards” are defined as standards that are established generally by private-sector bodies and are available for use by any person or organization, private or governmental. The term includes what are commonly referred to as “industry standards” as well as “consensus standards” but does not include professional standards of personal, conduct, private standards of individual firms, or standards mandated by law⁵⁵

The Circular also defines “voluntary standards bodies” as “nongovernmental bodies that are broadly based, multi-member, domestic and multinational organizations, including, for example, nonprofit organizations, industry associations, and professional technical societies.”⁵⁶

In addition to encouraging federal agencies to adopt voluntary standards in their procurement functions, Circular A-119 also encouraged them to participate in voluntary standards bodies.⁵⁷ Standards bodies in which federal agencies participated, however, were required to comply with certain minimum “due process” criteria.⁵⁸ These included, among other things, a “balance” requirement described as:

Inviting representatives of a broadly-based group of persons likely to have an interest in the subject including, for example, consumers; small business concerns; manufacturers; labor; suppliers; distributors; industrial, institu-

⁵⁴ Office of Mgmt. & Budget, Office Fed. Procurement Pol’y, Circular No. A-119, Federal Participation in the Development and Use of Voluntary Standards; Final Issuance, 45 Fed. Reg. 4,326 (Jan. 21, 1980) [hereinafter OMB Circular A-119 (1980)]. For a discussion of the history leading up to the 1980 version of OMB Circular A-119, see Baron, *supra* note 2, at 11–12.

⁵⁵ *Id.* ¶ 4.c.

⁵⁶ *Id.* ¶ 4.e.

⁵⁷ *Id.* ¶ 6.b.

⁵⁸ *Id.* ¶ 6.c; see also Hamilton, *supra* note 31, at 1346 (applying the term “due process” broadly to a set of procedural protections).

tional and other users; environmental and conservation groups; and State and local procurement and code officials.⁵⁹

It is notable that this requirement of Circular A-119 places an emphasis on *inviting* representatives of all interested stakeholder groups to participate in standardization, rather than enforcing any particular mix or numerical quota of representatives from different stakeholder categories, on one hand, or simply opening standardization activities to those who are interested, on the other.

E. THE REAGAN ERA: DEREGULATION AND FLEXIBILITY (1980s)

With the election of Ronald Reagan to the White House in 1980 and his administration's strong push toward deregulation of industry sectors, from airlines to oil and gas,⁶⁰ a permissive approach toward private industry standardization prevailed in the U.S. government's standardization policy. Accordingly, OMB revised the Circular on October 26, 1982,⁶¹ making a number of substantive changes. Most importantly, the revision expanded the scope of the Circular from federal procurement activity to both federal procurement and *regulatory* activity. In addition, the revision eliminated the 1980 version's enumerated "due process" requirements for federal participation in voluntary standards organizations. In response to public comments objecting to this deletion, OMB responded that "imposition of the mandatory procedures contained in the previous edition of the Circular is inappropriate, burdensome and costly and . . . peripheral to the fundamental aims of the Circular."⁶² The DOJ supported the elimination of the "rigid" 1980 due process requirements, but urged federal participants in SDOs to foster transparency and "open standards proceedings" to "mitigate the substantial anticompetitive potential inherent in private standards groups."⁶³

In line with the revisions of OMB Circular A-119, the FTC in 1983 issued a final staff report on standards and certification, which marked significant changes from the FTC's 1978 report.⁶⁴ The 1983 Report continued to recog-

⁵⁹ OMB Circular A-119 (1980), *supra* note 54, ¶ 6.c.

⁶⁰ See generally STEPHEN J. BREYER, *REGULATION AND ITS REFORM* (1982); Jefferson Decker, *Deregulation, Reagan-Style*, REG. REV. (Mar. 13, 2019), www.theregreview.org/2019/03/13/decker-deregulation-reagan-style/.

⁶¹ Office of Mgmt. & Budget, Exec. Office of the President, Issuance of Circular No. A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities," 47 Fed. Reg. 49,496 (Nov. 1, 1982).

⁶² *Id.*

⁶³ Letter from Ronald G. Carr, Acting Ass't Att'y Gen., Antitrust Div., U.S. Dept. of Justice, to Donald E. Sowle, Adm'r for Fed. Procurement Pol'y, Office of Mgmt. & Budget, Exec. Office of the President (June 22, 1982), *reproduced at* 47 Fed. Reg. 49,496 (Nov. 1, 1982).

⁶⁴ FED. TRADE COMM'N, *STANDARDS AND CERTIFICATION—FINAL STAFF REPORT* (1983) [hereinafter *FTC 1983 REPORT*].

nize that “the failure of a standards organization to provide procedural safeguards to those who may be adversely affected by its actions can constitute an unfair method of competition under Section 5 of the FTC Act.”⁶⁵ Nevertheless, the standard that it established for these procedural safeguards fell short of the FTC’s 1978 proposed requirement that SDOs offer all parties equal opportunity to participate at all stages of standards development. Rather, in its 1983 report, the FTC reasoned that SDOs must provide affected producers with notice, the opportunity to file a complaint with the SDO, and the right to a written response.⁶⁶

F. THE EVOLUTION OF SDO APPROACHES TO BALANCE (1980s)

As the U.S. government adopted a significantly more lenient approach toward SDO balance, ANSI fundamentally revised its processes. The 1983 version of ANSI’s *Procedures for the Development and Coordination of National Standards* takes a much more permissive approach to balance of interests than prior versions. The strict balance requirement included in the 1974 and 1977 versions of the *Procedures* is replaced by an obligation to secure the “Representation of Interests”: “All directly and materially affected interests shall have the opportunity for fair and equitable participation without dominance by any single interest.”⁶⁷

The previously mandatory provisions for balanced committee composition are referred to as “the historical criteria for balance.”⁶⁸ The 1983 *Procedures* stated that compliance with these “historical criteria” would usually satisfy the mandatory requirement to avoid dominance by any single interest; nevertheless, ANSI would no longer require or assess such balanced composition: “Unless it is claimed by a directly and materially affected interest that a single interest dominated the standards development process to the exclusion of fair and equitable consideration of other viewpoints, no test for dominance is required.”⁶⁹

The new version of the ANSI *Procedures* significantly weakened the requirement to seek balanced representation of different interest categories. It did not, however, abandon this requirement entirely. The *Procedures* also made it clear that “interests” still referred to constituencies with aligned commercial interests in a standard, such as producers, users, etc. Dominance by a single interest thus differed from domination of standards processes to the benefit of a single firm or single product, and referred to a situation in which a

⁶⁵ *Id.* at 262.

⁶⁶ *Id.* at 273.

⁶⁷ ANSI, *Procedures for the Development and Coordination of National Standards* 4 (1983).

⁶⁸ *Id.*

⁶⁹ *Id.*

single constituency would hold “a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation.” The revised procedures also continued to distinguish between product and safety standards and to impose more stringent balance criteria on the latter.

ANSI again revised its procedures relating to balance in 1987. The revised procedures stated that “[t]he standards development process should have a balance of interests and shall not be dominated by any single interest category.”⁷⁰ The 1987 revision of the *Procedures* made more explicit that—in the context of balance—the dominance that the standards development process must avoid is dominance by an interest *category*, rather than dominance by a single actor or by a coordinated group of actors. Nevertheless, the 1987 revision did not reinstate the rigid process for verifying balanced representation that existed in the 1970s. The 1987 revision stated that balanced committee composition would “usually satisfy” the balance requirement and advised SDOs to test balance in committee composition only if a directly and materially affected party claimed that a single interest category dominated the standards development process.

G. THE RISE OF CONSORTIA AND IT STANDARDIZATION (1980–1990s)

ANSI’s more flexible approach toward assessing balance of interests in the development of American National Standards may have reflected the significant transformations in the standardization ecosystem that were underway in the 1980s. Alternative models for standardization—referred to broadly as consortia—emerged alongside, or even in explicit reaction to, more established SDOs. Consortia arose because many firms viewed existing SDOs and their processes as inadequate, or too cumbersome, to meet the complex interoperability needs of new information and communication technologies.⁷¹ Consortia offer a potentially simpler, though sometimes unbalanced, alternative to more formal SDOs. As Martin Weiss and Carl Cargill observe, consortia “must be small groups with a relatively uniform preference structure in order to be effective. Almost by definition, these must be exclusive groups.”⁷²

⁷⁰ ANSI, *Procedures for the Development and Coordination of National Standards* 7 (1987).

⁷¹ Martin Weiss & Carl Cargill, *Consortia in the Standards Development Process*, 43 J. AM. SOC’Y INFO. SCI. 559 (1992); YATES & MURPHY, *supra* note 1, at 255–56 (“[I]n the late 1980s large information technology companies in the United States and elsewhere turned away from multi-stakeholder consensus-based standard-setting organizations and toward each other to address their standardization needs[.]”).

⁷² Weiss & Cargill, *supra* note 71, at 563. David Teece and Edward Sherry acknowledge that the shift from formal SDOs to less formal consortia “can potentially have an adverse effect on the openness and transparency of decision making,” but argue that the absence of complex procedural rules is an advantage, and should not give rise to antitrust concerns, so long as consortia

In addition to consortia driven by corporate members, the Internet Engineering Task Force (IETF) introduced a new type of standards organization with its own institutional norms. IETF arose in 1985 out of the U.S. government's ARPANET program. IETF embodies a model in which technical work is open to meaningful and effective participation by all interested individuals. Participants included, at least in the IETF's early days, a significant number of academic and government representatives.

Consortia and the early IETF constituted formidable competitors to more formal SDOs, because they offered an unbureaucratic venue for homogeneous groups to make rapid progress on the development of technically viable standards. IETF's seemingly "autocratic" governance structure (decisions were largely made by a centralized group of engineers) came under increasing criticism by its diverse participants, culminating in 1992 in a "constitutional crisis," which initiated a new institutional model based more heavily on principles of openness. (See Part II.M, below.)⁷³ Nevertheless, by that time, the IETF had already emerged as the primary venue for internet standards development.

These consortia models thus competed with traditional SDOs, which had to become more flexible to remain viable. At the same time, closed standardization processes were at odds with the societal concerns that had led to the formalization of due process principles for standardization in the 1970s. Even though the OMB eliminated the Circular's explicit reference to these due process principles in 1982, the early IETF and the consortia emerging in the 1980s seemingly fell outside the Circular's definition of "voluntary standards body."

H. THE IMPACT OF ANTITRUST LAW ON BALANCE REQUIREMENTS: *HYDROLEVEL AND ALLIED TUBE* (1980s)

Industrial collusion in the context of standard setting has been observed for many years. For example, in 1962, the Department of Justice secured criminal indictments against the Johns-Manville Corporation and several of its employees for violations of the Sherman Antitrust Act for bringing about the adoption by ASTM and another SDO "specifications designed to increase the costs of foreign-made asbestos-cement pipe and couplings, to render such products ineligible for use, and to otherwise restrict and eliminate competition from such foreign-made products."⁷⁴ Yet ASTM itself was exonerated from the charges, and the judge later spoke glowingly of "the balance of interests rep-

clearly specify their rules in advance. David J. Teece & Edward F. Sherry, *Standards Setting and Antitrust*, 87 MINN. L. REV. 1913, 1976 (2003).

⁷³ RUSSELL, *supra* note 28, at 256.

⁷⁴ Application of Am. Soc'y for Testing & Materials, 231 F. Supp. 686, 687 (E.D. Pa. 1964).

resented on ASTM committees and . . . the detailed and scrupulously observed procedure which governs their operation.”⁷⁵ By the 1980s, SDOs’ own procedures and processes, when coupled with allegedly anticompetitive behavior by SDO participants, began to come under judicial scrutiny. Two of the most important cases of this type were *American Society of Mechanical Engineers v. Hydrolevel Corp.*⁷⁶ and *Allied Tube & Conduit Corp. v. Indian Head, Inc.*⁷⁷ Each case involved antitrust claims that challenged the procedures used within SDOs and helped to shape the modern understanding of “due process” requirements within the standardization context.⁷⁸

Hydrolevel involved a standard for boilers and pressure vessels promulgated by a committee of the American Society of Mechanical Engineers (ASME), an ANSI-accredited SDO. Hydrolevel marketed a boiler safety device that competed with devices marketed by the industry leader, McDonnell & Miller, Inc. (M&M). In response to the loss of a large customer to Hydrolevel, two employees of M&M-affiliated companies, who also served as the chair and vice-chair of the relevant ASME subcommittee, issued a statement on ASME letterhead that the type of device manufactured by Hydrolevel provided “no positive assurance” that ASME’s safety standards would be met. M&M employees then distributed this letter to potential customers, implying that Hydrolevel’s device was unsafe and causing Hydrolevel to lose significant business. When Hydrolevel discovered that M&M was behind the ASME letter, it sued M&M and ASME for violating Section 1 of the Sherman Antitrust Act.

Hydrolevel settled its claims against M&M, but ASME refused to settle, taking the position that it should not be held responsible for the anticompetitive conduct of its participants. The Supreme Court decided the case in 1982, not only holding that ASME was liable for the conduct of the M&M employees acting in their capacities as ASME officers, but also affirming an award of treble damages against the SDO. The *Hydrolevel* decision established that SDOs can be liable for antitrust violations committed by their participants and underscored the need for SDOs to adopt processes that mitigate the potential for anticompetitive outcomes.⁷⁹

⁷⁵ STEVEN M. SPIVAK & F. CECIL BRENNER, *STANDARDIZATION ESSENTIALS: PRINCIPLES AND PRACTICE* 38 (2001) (quoting unreported findings of fact affirmed in *Application of the American Society for Testing & Materials*, 231 F. Supp. 686, 687 (E.D. Pa. 1964)).

⁷⁶ 456 U.S. 556 (1982).

⁷⁷ 486 U.S. 492 (1988).

⁷⁸ Legal regimes, and antitrust law in particular, have strongly shaped SDO practices and procedures. See JRC REPORT, *supra* note 2, at 43–53.

⁷⁹ *Hydrolevel*, 456 U.S. at 572–73 (“Only ASME can take systematic steps to make improper conduct on the part of all its agents unlikely, and the possibility of civil liability will inevitably be a powerful incentive for ASME to take those steps. Thus, a rule that imposes liability on the standard-setting organization—which is best situated to prevent antitrust violations through the

In *Allied Tube*, the Supreme Court clarified the implications of this principle for SDO balance requirements. The SDO in question was the National Fire Protection Association (NFPA), a large organization formed in 1896 to develop standards for fire-safety equipment and systems.⁸⁰ The plaintiff, a manufacturer of polyvinyl chloride (PVC) conduit for electrical wiring, alleged that manufacturers of steel conduit colluded to exclude PVC conduit from the National Electrical Code. To this end, the steel-conduit manufacturers allegedly packed the NFPA meeting at which the Code would be approved with 155 individuals “whose only function would be to vote against the [PVC] proposal.”⁸¹ The PVC proposal was defeated by a narrow margin.⁸²

Shortly after this vote, the plaintiff brought suit against Allied Tube and other steel-conduit manufacturers alleging that they had violated Section 1 of the Sherman Act by unreasonably restraining trade in the electrical-conduit market. After a jury trial, a verdict was entered against Allied Tube and its co-defendants.⁸³ But the district court granted Allied Tube’s motion for judgment notwithstanding the verdict, citing the *Noerr-Pennington* doctrine,⁸⁴ and it was this issue that was eventually appealed to the Supreme Court. (The plaintiff won on this point as well—the jury verdict against Allied Tube was reinstated.⁸⁵)

But it is not the *Noerr* issue for which the *Allied Tube* case is remembered today. Rather, it is the Court’s dicta approving the jury’s finding of antitrust liability against Allied Tube and the other steel-conduit manufacturers. Specifically, the Court recognized that the “hope of procompetitive benefits [from standard setting] depends upon the existence of safeguards sufficient to prevent the standard-setting process from being biased by members with economic interests in restraining competition.”⁸⁶ It went on to observe that

abuse of its reputation—is most faithful to the congressional intent that the private right of action deter antitrust violations.”).

⁸⁰ At the time, NFPA had approximately 30,000 members, drawn from state and local governments, educational institutions, professional associations, manufacturers and users of fire-fighting equipment, and fire insurance companies. Hamilton, *supra* note 31, at 1340 (“Manufacturers constitute about six and one-half percent and insurance companies eleven percent of NFPA’s membership.”).

⁸¹ *Allied Tube*, 486 U.S. at 496.

⁸² *Id.* at 496–97.

⁸³ *Id.* at 498.

⁸⁴ *E. R.R. Presidents Conf. v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961); *United Mine Workers of Am. v. Pennington*, 381 U.S. 657 (1965). The so-called *Noerr-Pennington* doctrine provides that “[w]here a restraint upon trade or monopolization is the result of valid governmental action, as opposed to private action, those urging the governmental action enjoy absolute immunity from antitrust liability for the anticompetitive restraint.” *Allied Tube*, 486 U.S. at 499 (quoting *Noerr*, 365 U.S. at 136).

⁸⁵ *Allied Tube*, 486 U.S. at 509–10.

⁸⁶ *Id.* at 509.

“[w]hat [an SDO member] may not do (without exposing itself to possible antitrust liability for direct injuries) is bias the [standard-setting] process by, as in this case, stacking the private standard-setting body with decisionmakers sharing their economic interest in restraining competition.”⁸⁷ Thus, the Court recognized that an SDO member’s attempt to stack the deck to defeat a particular proposal or to gain some other economic advantage in standard-setting could constitute a violation of the Sherman Act. Accordingly, the Court articulated a vision of a properly functioning standardization system as one that is “nonpartisan.”⁸⁸

I. THE NTTAA, THE 1998 REVISIONS TO OMB CIRCULAR A-119, AND ANSI’S ESSENTIAL REQUIREMENTS (1990S–2000S)

In 1993, five years after the *Allied Tube* decision, OMB issued a new version of Circular A-119.⁸⁹ The 1993 version did not require that SDOs adopt specific balancing of interests or other due process principles.⁹⁰

Then, in 1996, President Clinton signed the National Technology Transfer and Advancement Act (NTTAA).⁹¹ Among other things, the NTTAA embodied in statutory language the OMB Circular A-119 requirement that federal agencies “use technical standards that are developed or adopted by voluntary consensus standards bodies.”⁹² Because the NTTAA did not expressly define the term “voluntary consensus standards body,” the term was generally understood to refer to the definition contained in the Circular.

The enactment of the NTTAA led to another review of the Circular, and OMB released a set of revisions on February 19, 1998.⁹³ The 1998 revisions to the Circular constitute a complete overhaul of its structure and language, converting it to a “plain English” question-and-answer format. The 1998 revisions substantially altered the definition of “voluntary consensus standards body” that prior versions of the Circular had adopted. The new definition reads as follows:

A voluntary consensus standards body is defined by the following attributes:

- (i) Openness.

⁸⁷ *Id.* at 511.

⁸⁸ *Id.* at 506–07.

⁸⁹ Revision of OMB Circular No. A-119. No.; Notice of Implementation, 58 Fed. Reg. 57,643 (Oct. 26, 1993).

⁹⁰ *Id.*

⁹¹ Pub. L. No. 104-113 (1996).

⁹² *Id.* § 12(d)(1).

⁹³ OMB Circular No. A-119; Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, 63 Fed. Reg. 8,546 (Feb. 19, 1998).

- (ii) Balance of interest.
- (iii) Due process.
- (iv) An appeals process.
- (v) Consensus, which is defined as general agreement, but not necessarily unanimity, and includes a process for attempting to resolve objections by interested parties⁹⁴

The Supreme Court's decision in *Allied Tube* may have influenced the OMB's development of this new set of criteria for SDOs, particularly the formal requirement of "balance" (which would conceivably have prevented the type of deck-stacking attempted by Allied and its co-conspirators). But other than "consensus," none of the new terms (including "balance of interest") was defined in the 1998 version of the Circular.⁹⁵

J. THE STANDARDS DEVELOPMENT ORGANIZATION ADVANCEMENT ACT (SDOAA) OF 2004

In the late 1990s and early 2000s, the standardization world witnessed a wave of litigation involving allegations of patent-related deception by companies including, most notably, Rambus, Inc.⁹⁶ Among other things, Rambus was the subject of an investigation and prosecution by the FTC, which accused Rambus of violating both the Sherman Act and the FTC Act. These antitrust actions caused SDOs around the world to revisit their intellectual property policies and to consider their potential liability in such disputes.⁹⁷ One of the outgrowths of this heightened awareness was the enactment in 2004 of the Standards Development Organization Advancement Act (SDOAA),⁹⁸ which was intended to offer SDOs protection against certain types of antitrust liability that could arise from their members' actions.

Rather than craft a new legislative framework for this protection, Congress simply added SDOs to the types of entities protected under the existing National Cooperative Research and Production Act of 1993 (NCRPA),⁹⁹ which itself was an outgrowth of the Reagan-era National Cooperative Research Act

⁹⁴ *Id.* at 8,554 (revised OMB Circular No. A-119, § 4.a(1)).

⁹⁵ In 1997, several commenters requested that OMB clarify these definitions, but OMB declined to do so. *Id.* at 8,548 (item no. 28).

⁹⁶ See generally Renata B. Hesse & Frances Marshall, *U.S. Antitrust Aspects of FRAND Disputes*, in *THE CAMBRIDGE HANDBOOK OF TECHNICAL STANDARDIZATION LAW: COMPETITION, ANTITRUST, AND PATENTS* 263, 272–74 (Jorge L. Contreras ed., 2018).

⁹⁷ See JRC REPORT, *supra* note 2, at 140.

⁹⁸ Standards Development Organization Advancement Act of 2004 (SDOAA), Pub. L. No. 108-237 (2004) (codified at 15 U.S.C. §§ 4301–4306).

⁹⁹ National Cooperative Production Amendments of 1993, Pub. L. No. 103-42 (June 10, 1993) (codified at 15 U.S.C. §§ 4301 et seq.).

of 1984 (NCRA).¹⁰⁰ The NCRA was enacted to encourage innovation and promote trade by facilitating the participation of U.S. firms in R&D joint ventures.¹⁰¹ To achieve this goal, the NCRA offered two principal antitrust protections to qualifying “joint research and development ventures”: an immunity from treble damages under the antitrust laws¹⁰² and a requirement that the conduct of joint R&D by such entities be evaluated under the antitrust “rule of reason” and not be subject to per se liability.¹⁰³ In 1993, given pressures on U.S. manufacturing industries, the protections of the NCRA were extended to joint production ventures.¹⁰⁴

The NCRA originally defined “joint research and development ventures” as “two or more persons” engaged in one of a variety of enumerated technical cooperation activities and not engaged in any of a list of prohibited anticompetitive activities.¹⁰⁵ The NCRPA preserved this definitional structure.¹⁰⁶ The SDOAA added “standards development organizations” to the types of entities protected by the Act. It defines a “standards development organization” as “a domestic or international organization that plans, develops, establishes, or coordinates voluntary consensus standards using procedures that incorporate the attributes of openness, balance of interests, due process, an appeals process, and consensus in a manner consistent with the Office of Management and Budget Circular Number A-119, as revised February 10, 1998.”¹⁰⁷ Like the 1998 circular, the SDOAA does not define the SDO balance-of-interests requirement.

However, the preamble to the SDOAA elaborates on the due process requirements of OMB Circular A-119, noting that the “balance” requirement provides for “balancing interests so that standards development activities are not dominated by any single group of interested persons.”¹⁰⁸ This “non-domination” balance requirement, which must be read into the text of the SDOAA, is not a quota requirement. That is, the SDOAA does not mandate that SDOs ensure that all or every conceivable interest group be represented in SDO decision making, but only that SDO deliberations are not “dominated” by any

¹⁰⁰ Pub. L. No. 98-462 (Oct. 11, 1984) (codified at 15 U.S.C. §§ 4301 et seq.).

¹⁰¹ *Id.*

¹⁰² *Id.* § 4.

¹⁰³ *Id.* § 3.

¹⁰⁴ NCRPA, *supra* note 99.

¹⁰⁵ NCRA, *supra* note 100, § 2(6).

¹⁰⁶ NCRPA, *supra* note 99.

¹⁰⁷ SDOAA, *supra* note 98, § 103(1)(8). Interestingly, the SDOAA (both at the time of its enactment and today) expressly incorporates the 1998 version of OMB Circular A-119 into its definition of “standards development organization.” Thus, it is not clear that definitions from subsequent versions of the Circular (e.g., the 2016 version, discussed below) are actually incorporated into the SDOAA.

¹⁰⁸ *Id.* § 102(5)(C).

single group. This non-domination requirement echoes the cautionary language of the Supreme Court in *Allied Tube*, which warned against “stacking the private standard-setting body with decisionmakers sharing [an] economic interest in restraining competition.”¹⁰⁹

K. BALANCE AND THE ANSI ESSENTIAL REQUIREMENTS

ANSI’s *Procedures* document was superseded in 2003 by a new document titled *Due Process Requirements for American National Standards*, better known as the *Essential Requirements*. At a high level, the *Essential Requirements* echo the “due process” requirements of OMB Circular A-119. Thus, they provide that a developer of American National Standards must operate according to principles of openness, lack of dominance, balance, consensus, and availability of appeals.¹¹⁰ In elaborating the balance requirement, however, the *ANSI Essential Requirements* adopted a semi-structured approach falling somewhere between the rigid quota requirements of ASTM and the unstructured requirements of Circular A-119 and the SDOAA.

Section 1.3 of the *Essential Requirements*, which establishes at the outset that “[t]he standards development process should have a balance of interests,” imposes the following affirmative requirements on accredited SDOs:

Participants from diverse interest categories shall be sought with the objective of achieving balance. If a consensus body lacks balance in accordance with the historical criteria for balance, and no specific alternative formulation of balance was approved by the ANSI Executive Standards Council, outreach to achieve balance shall be undertaken.¹¹¹

The “historical criteria” referred to above are set out in section 2.3, which provides:

Historically the criteria for balance are that a) no single interest category constitutes more than one-third of the membership of a consensus body dealing with safety-related standards or b) no single interest category constitutes a majority of the membership of a consensus body dealing with other than safety-related standards.¹¹²

In defining an “interest category,” ANSI notes that such categories may vary from case to case, being “a function of the nature of the standards being developed.” Though not strictly required, three interest categories are sug-

¹⁰⁹ *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 522 (1988).

¹¹⁰ ANSI, *ANSI Essential Requirements: Due Process Requirements for American National Standards 4* (2019) [hereinafter *ANSI Essential Requirements* (2019)].

¹¹¹ *Id.*

¹¹² *Id.* § 2.3.

gested: producer, user,¹¹³ and general interest. ANSI leaves the door open, however, for the consideration of additional interest categories “where appropriate.” These categories include consumer, directly affected public, distributor and retailer, industrial/commercial, insurance, labor, manufacturer, professional society, regulatory agency, testing laboratory, and trade association.¹¹⁴

The ANSI *Essential Requirements* impose an affirmative duty on accredited SDOs to seek participants from diverse interest categories, and that if balance does not exist, the SDO must undertake outreach to achieve that balance. As the ANSI Executive Standards Council clarified in 2016, “outreach to achieve balance in accordance with [an SDO’s] accredited procedures is a requirement.”¹¹⁵ Such outreach must be targeted to any interest categories not sufficiently represented on an SDO consensus body, and may include “specific website solicitations, webinars, meeting announcements with specific recruitment of identified interest categories sought, social media postings, targeted solicitations in meeting agendas and reports, trade press, publications, direct E-mails/mailings, press releases, articles, phone calls (document them) and soliciting recommendations from consensus body members.”¹¹⁶

In addition to these outreach requirements, the ANSI *Essential Requirements* include a separate non-domination requirement: “The standards development process shall not be dominated by any single interest category, individual or organization. Dominance means a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints.”¹¹⁷

ANSI considers balance and lack of dominance to be distinct considerations.¹¹⁸ As its Executive Standards Council explains: “The existence of a balanced consensus body does not preclude the exercise of dominance. Similarly, the existence of a less than perfectly balanced consensus body does not necessarily reflect a process in which dominance automatically occurs.”¹¹⁹

¹¹³ Four different sub-categories of “user” are defined based on the type of standard being produced: consumer, industrial, government, and labor. *Id.*

¹¹⁴ ANSI’s non-exhaustive list of potential interest categories does not include firms seeking to monetize patents or foreign manufacturers.

¹¹⁵ ANSI, Guidance on “Balance” and Outreach Within the American National Standards (ANS) Process (ExSC 042_2016) ¶ 3.0 (June 8, 2016) [hereinafter ANSI Balance Guidance]. When assessing whether an SDO has complied with this requirement, ANSI “may request related evidence that demonstrates the type of outreach undertaken by a developer to achieve balance.” *Id.*

¹¹⁶ *Id.* ¶ 4.

¹¹⁷ ANSI *Essential Requirements* (2019), *supra* note 110, § 1.2.

¹¹⁸ ANSI Balance Guidance, *supra* note 115, ¶ 6.

¹¹⁹ *Id.*

Accordingly, ANSI requires both affirmative outreach activity to ensure balance and avoidance of dominance by any single interest category.

L. THE 2016 REVISION OF OMB CIRCULAR A-119 AND BEYOND

In 2016, OMB again amended Circular A-119.¹²⁰ The 2016 version includes the following provision: “Balance: The standards development process should be balanced. Specifically, there should be meaningful involvement from a broad range of parties, with no single interest dominating the decision-making.”¹²¹

This version of the Circular encourages “meaningful involvement” not from all affected stakeholder groups, but from “a broad range” of parties. This requirement avoids formal quota language, as it does not specify that SDO decision-making bodies should be composed of particular proportions of different stakeholder groups. Rather, the balance to be attained appears more flexible. In its responses to comments on the definition of balance, the OMB stated that it intended its definition of balance to be “consistent” with ANSI’s *Essential Requirements*, and to “allow for flexibility in how balance is determined during the consensus phase of the development or adoption of the standard.”¹²²

In addition, the 2016 Circular echoes the “non-domination” language of the 2004 SDOAA. It prohibits any “single interest from dominating the decision-making.” This being said, the 2016 version of the Circular introduces a new element to the balance calculation: the differing interests of holders of IPRs and implementers of a standard. While this distinction is not mentioned in the section of the Circular that discusses balance, it appears in the immediately preceding paragraph, which defines “voluntary consensus standard”:

In order to qualify as a “voluntary consensus standard” for the purposes of this Circular, a standard that includes patented technology needs to be governed by such policies, which should be easily accessible, set out clear rules governing the disclosure and licensing of the relevant intellectual property, and take into account the interests of all stakeholders, including the IPR holders and those seeking to implement the standard.¹²³

¹²⁰ Revision of OMB Circular No. A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” 81 Fed. Reg. 4,673 (Jan. 27, 2016), referencing Office of Mgmt. & Budget, Exec. Office of the President, Circular No. A-119: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (Jan. 22, 2016) [hereinafter OMB Circular A-119 (2016)].

¹²¹ OMB Circular A-119 (2016), *supra* note 120, § 2(e)(ii).

¹²² *Id.* Supplementary Information, Discussion and Responses to Significant Comments at 9.

¹²³ *Id.* § 2(d).

The inclusion of IPR holders in this seeming invocation of balance principles would become important in the years immediately following the publication of the 2016 Circular, as discussed in Part N, below.

M. PRACTICAL BALANCE

Alongside the chronological development of standardization balance policies described above, some SDOs followed different paths. One model of standards development that emerged from the computing industry in the 1980s eschews any formal requirement to balance stakeholder interests and instead relies on the openness of the standardization process to ensure that all interested parties have an opportunity to participate.¹²⁴ This emphasis on openness is coupled with monitoring and informal intervention by the group's leadership "to ensure that no one group holds an overwhelming edge that might influence adversely the fairness of the standards produced."¹²⁵

Despite the potential benefits of qualifying as "voluntary consensus standards bodies" under OMB Circular A-119 and the SDOAA, and achieving status as developers of American National Standards, some SDOs in this camp have steadfastly refused to adopt *any* formal balance requirements in their rules and policies. The most notable of these holdouts is the IETF,¹²⁶ which in 1992 moved to a governance model emphasizing its openness to all interested parties¹²⁷ but which does not impose any formal requirements of balance on its deliberations.¹²⁸ The IETF explained in its 2012 comments to OMB its view that a balance requirement "is largely duplicative of the 'openness' and 'due process' prongs of the definition" of a voluntary consensus standards body.¹²⁹ The IETF further noted that both federal agencies and academic commentators have widely acknowledged its exceptionally open and democratic character.¹³⁰ As such, IETF contended that it achieves a high degree of balance through the mechanism of openness—what may be termed

¹²⁴ See CARL F. CARGILL, INFORMATION TECHNOLOGY STANDARDIZATION: THEORY, PROCESS, AND ORGANIZATIONS 99, 109 (1989).

¹²⁵ *Id.* at 108.

¹²⁶ IETF has never sought ANSI accreditation.

¹²⁷ See Letter from Jorge L. Contreras, Russ Housley & Bernard Aboba to Office of Info. & Regulatory Affairs, Office of Mgmt. & Budget, Exec. Office of the President at 2 (Apr. 29, 2012) [hereinafter IETF Letter] ("The IETF is completely open to newcomers, and has no membership fee or other membership requirements."); see also YATES & MURPHY, *supra* note 1, at 253–54.

¹²⁸ See YATES & MURPHY, *supra* note 1, at 253–54. There are some exceptions to this general principle at IETF. One exception concerns the composition of Nominating Committees (NomComs), whose ten members are randomly selected from a pool of qualifying volunteers. If the randomly selected candidates include more than two with the same affiliation, the third such candidate is replaced with another candidate randomly selected from the pool.

¹²⁹ IETF Letter, *supra* note 127, at 4.

¹³⁰ *Id.*

“practical balance.” This approach, while not achieving the numerical balance that a quota or more formal balancing system could achieve, has resulted in a longstanding standardization process that has produced numerous standards and protocols that define the internet infrastructure. Moreover, this approach does appear to enable the participation of diverse interest groups in IETF standardization projects when potential standardization activity impacts issues of public concern, such as privacy and government surveillance.¹³¹

IETF has reinforced its interpretation of “balance” in the stated principles of the OpenStand initiative, which also includes the IEEE Standards Association and W3C. The OpenStand initiative includes “balance” as one of the five principles shaping the “modern paradigm for standards” and defines maintaining “balance” in this context as ensuring that standards activities “are not exclusively dominated by any particular person, company or interest group.”¹³² As such, the IETF (and IEEE-SA and W3C) seem to embrace a “non-domination” interpretation of balance, rather than a more prescriptive formula for including certain interest groups.

Although they have refused to adopt formal balance requirements, some SDOs, including IETF, have taken positive steps to encourage participation by diverse stakeholder groups, including consumers and civil society.¹³³ For example, IETF, through its parent organization, the Internet Society, regularly funds the participation in IETF standardization activities of individuals from developing countries.¹³⁴

N. BALANCE IN INTELLECTUAL PROPERTY POLICIES

In 2015, IEEE amended its patent policy¹³⁵ in a manner that some argued unduly favored “product-centric” over “patent-centric” firms. Allegations of

¹³¹ See ALISON HARCOURT, GEORGE CHRISTOU & SEAMUS SIMPSON, GLOBAL STANDARD SETTING IN INTERNET GOVERNANCE 160–61 (2020) (integration of consumer interest groups into IETF discussion of government surveillance of Internet traffic); *id.* 182–83 (involvement of Center for Democracy and Technology and other citizen groups in IETF data privacy discussions); John B. Morris, Jr., *Injecting the Public Interest into Internet Standards*, in OPENING STANDARDS: THE GLOBAL POLITICS OF INTEROPERABILITY 3, 9–10 (Laura DeNardis ed., 2011) (discussing examples of engagement by public interest and policy advocates in IETF standard setting).

¹³² *Principles*, OPEN STAND, open-stand.org/about-us/principles/.

¹³³ See JRC REPORT, *supra* note 2, at 120.

¹³⁴ See Jorge L. Contreras, *National Disparities and Standards-Essential Patents: Considerations for India*, in COMPLICATIONS AND QUANDARIES IN THE ICT SECTOR: STANDARD ESSENTIAL PATENTS AND COMPETITION ISSUES 1, 13 (Ashish Bharadwaj, Vishwas H. Deviah & Indranath Gupta eds., 2017). Since 2012, there has also been an increased focus within IETF on representation of women in leadership positions. Nevertheless, diversity among individual SDO participants along demographic lines needs to be distinguished from balanced representation of different stakeholder interest categories.

¹³⁵ For a discussion of these amendments, see JRC REPORT, *supra* note 2, at 151–64.

imbalance related not only to the substance of the revised IEEE policy, but also to the decision-making process that led to its adoption.¹³⁶ On February 2, 2015, the DOJ issued a Business Review Letter, which recognized that an unbalanced process for setting an IPR policy may violate antitrust laws.¹³⁷ Nevertheless, after reviewing the process by which the IEEE adopted the amendment, the letter concluded that, “[g]iven the numerous opportunities for comment, discussion, and voting at different levels within IEEE, the Department cannot conclude that the process raises antitrust concerns.”¹³⁸ To reach this conclusion, the DOJ relied on the ability of all stakeholders to make comments, approval of the policy by majorities and supermajorities in different governance bodies, and the “fiduciary” duty of members of these bodies towards the IEEE,¹³⁹ but it did not further discuss patent-centric firms’ concerns with the composition of these governance bodies.

Under the Trump administration, the DOJ adopted a more stringent interpretation of balance requirements for SDOs under the antitrust laws, in particular with respect to the balance between the interests of patent- and product-centric firms.¹⁴⁰ In 2018, the DOJ, in reviewing a proposed ANSI policy change regarding the review of letters of assurance from accredited SDOs, reminded ANSI that “the Antitrust Division will . . . be skeptical of rules that [SDOs] impose that appear designed specifically to shift bargaining leverage from IP creators to implementers, or vice versa.”¹⁴¹ The DOJ then called upon ANSI to “promote balanced representation in decisional bodies so that diverse interests are represented and SDO decisions do not shift bargaining leverage in favor of one set of economic interests, including the interests of either implementers or patent holders.”¹⁴²

¹³⁶ See *supra* note 4 (citing sources).

¹³⁷ “If a standards-setting process is biased in favor of one set of interests, there is a danger of anticompetitive effects and antitrust liability.” Letter from Renata B. Hesse, Acting Assistant Att’y Gen. U.S. Dep’t of Justice, to Michael A. Lindsay, Esq., Dorsey & Whitney LLP (Feb. 2, 2015).

¹³⁸ *Id.* at 8.

¹³⁹ It is not clear that members of IEEE committees and groups, other than its Board of Directors, have a legally recognized fiduciary duty to IEEE.

¹⁴⁰ See, e.g., Makan Delrahim, Ass’t Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Remarks as Prepared for Delivery at U.S.C. Gould School of Law—Application of Competition Policy to Technology and IP Licensing: Taking It to the Limit: Respecting Innovation Incentives in the Application of Law (Nov. 10, 2017); Makan Delrahim, Ass’t Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, Remarks as Prepared for Delivery at University of Pennsylvania Law School: The “New Madison” Approach to Antitrust and Intellectual Property Law (Mar. 16, 2018).

¹⁴¹ DOJ ANSI Letter, *supra* note 6, at 1.

¹⁴² Letter from Makan Delrahim, Ass’t Att’y Gen., Antitrust Div., U.S. Dep’t of Justice, to Sophia A. Muirhead, Gen. Counsel & Chief Compliance Officer, IEEE, at 10 n.53 (Sept. 10, 2020) [hereinafter DOJ IEEE Update Letter] (referencing DOJ letters to ANSI). The DOJ again reminded ANSI of the importance of balance in a 2020 review of the 2015 U.S. Standards Strategy published by ANSI. U.S. Dep’t of Justice Antitrust Division, Comments on the U.S. Standards Strategy 3 (Sept. 8, 2020).

In 2019, the DOJ expressed “significant concerns” that the GSM Association and its telecommunications network operator members “used an unbalanced standard-setting process, with procedures that stacked the deck in their favor, to promulgate [a standard] with self-dealing provisions designed to enhance or maintain the incumbent operators’ competitive position by entrenching network locking practices and otherwise deterring potentially disruptive competition.”¹⁴³

And in September 2020, the DOJ issued an “update” to its 2015 IEEE business review letter, citing both OMB Circular A-119 and concerns “that the IEEE’s process for adopting the Policy was not balanced.”¹⁴⁴ The Trump DOJ’s emphasis on balancing the interests of patent- and product-centric firms in SDO policy making has not continued in the Biden administration. Evidence of this shift can be seen in the Biden DOJ’s reclassification of the Trump DOJ’s September 2020 letter about IEEE as “competition advocacy” rather than a revision of the DOJ’s 2015 IEEE business review letter.¹⁴⁵ Nevertheless, efforts remain ongoing within the United States, including within Congress, to require SDOs to balance patent-centric and product-centric interests in SDO policy making.¹⁴⁶

III. BALANCE REQUIREMENTS IN EUROPEAN STANDARDIZATION POLICY AND PRACTICE

Whereas in the United States, the practice of SDOs has informed the development of balance requirements in antitrust law and related statutes since the 1980s, the historical arc is more complex in the EU. There as well, balance has played a role in SDO practices and national policies since the beginning of standardization in the late 19th century. SDO practice fed into EU-level policy via the European standardization policy that emerged as part of the single-market effort that began in the 1980s. From there, it found its way into EU competition policy starting from the mid-1990s.

¹⁴³ DOJ GSMA Letter, *supra* note 8, at 4.

¹⁴⁴ DOJ IEEE Update Letter, *supra* note 142, at 10–11.

¹⁴⁵ Matthew Perlman, *Does DOJ’s Rebranding of Patent Policy Letter Hint at More?*, LAW360 (May 5, 2021) (quoting acting Assistant Attorney General Richard A. Powers).

¹⁴⁶ *See, e.g.*, the “Promoting Fairness and Due Process in Standards Development Act,” filed by Senator Christopher Coons (D-Del.) in the Senate Foreign Relations Committee in April 2021, and a corresponding amendment filed by Senator Jerry Moran (R-Kan.) in the Senate Commerce Committee. These bills would have offered financial incentives to U.S. firms that participate in SDOs that seek to balance “economic models” in their policy making. These provisions have since been eliminated in committee revision.

A. HISTORICAL ORIGINS

As in the United States, standardization in Europe has its origins in the standardization “movement” of the late 19th and early 20th centuries.

Given the prominent role that international standards play in European National Standards Bodies (NSBs), it is not surprising that European NSBs were built on procedural principles similar to those on which international and U.S. standards bodies were built.

The importance of a balance of interests in representation in standards development, one of the most prominent standardization principles at the international standards organizations of the time, was similarly recognized by the early European NSBs and their individual leadership.¹⁴⁷ Government at that time, however, imposed limited formal requirements on private standards development. The British Standards Institute (BSI) was first granted a Royal Charter in 1929, but this document does not stipulate specific standardization processes or principles. In Germany and other European countries, there was no formal governmental standardization policy at the time. Nevertheless, NSBs such as Germany’s Deutsches Institut für Normung (DIN) already saw a need to strengthen the legitimacy of their norms, and formulated general standardization principles. The preamble of DIN’s 1928 “standardization principles” defined a general balance requirement: “Standards must not be imposed from above but have to be the result of collaborative efforts and agreement of all participants among producers, merchants, consumers, public authorities and science.”¹⁴⁸

B. NATIONAL STANDARDS BODIES: GOVERNMENT RECOGNITION AND FORMAL STANDARDIZATION PRINCIPLES

During the 1960s and 1970s, private standards development in Europe was increasingly criticized as overly responsive to industry interests at the expense of other societal groups and concerns.¹⁴⁹ At the same time, technology standards became increasingly important not only for industry, but also for regula-

¹⁴⁷ YATES & MURPHY, *supra* note 1, at 79, indicate that the main mover behind the creation of DIN, Waldermar Hellmich, believed very strongly in the need to involve all stakeholders in standardization proceedings, in order to ensure both the quality and the legitimacy of the resulting standard.

¹⁴⁸ Günther Luxbacher, *DIN Von 1917 Bis 2019: Normung Zwischen Konsens Und Konkurrenz Im Interesse Der Technisch-Wirtschaftlichen Entwicklung* 88 (2020). Luxbacher highlights that at that time, similar to the English “consumer,” the German word “Verbraucher” did not refer to individual end users, but to industrial and commercial users of industrial goods, such as the railways. *Id.* at 84.

¹⁴⁹ *See, e.g., id.* at 353–55 (discussing criticism leveled at private standards development in Germany).

tion (e.g., product-safety regulations).¹⁵⁰ In this context, governments in many European countries perceived the need for a more formal standardization policy. This standardization policy generally entailed governmental recognition of a private-sector NSB as the country's primary developer of national standards and representative in international standardization. In return, these policies stipulated standardization process principles—with different degrees of stringency and specificity—that aimed at ensuring better representation of dispersed and traditionally underrepresented societal interests (most notably consumers, but also labor, government, science, and—later—environmental groups).

There were two forms that these standardization policies could take. Countries such as Austria, Belgium, and France chose to legislate on the matter, whereas Denmark, Germany, Sweden, and the United Kingdom instead opted for an agreement between the government and the NSB.

The *Staatsvertrag*, the 1975 treaty setting out the agreement between the German government and DIN exemplifies a flexible approach to standardization policy.¹⁵¹ The treaty makes no mention of a balance of interests between different constituencies or private stakeholder groups within DIN. It does however commit DIN to abide by the standardization principles defined in DIN Standard 820-1.¹⁵²

The revised DIN standardization principles state that the constitution of standardization committees should follow the principle that the different interests are represented in reasonable proportion to each other.¹⁵³ The document

¹⁵⁰ Luxbacher notes that, beginning in the mid-1960s, the German legislature considered the domain of product safety to be too important to be left entirely to industry self-regulation. *See id.* at 409–10. The adoption of product safety laws making numerous references to DIN's privately developed standards led to scrutiny of the legitimacy and constitutional acceptability of DIN's role.

¹⁵¹ Vertrag zwischen der Bundesrepublik Deutschland, vertreten durch den Bundesminister für Wirtschaft, und dem DIN Deutsches Institut für Normung e. V., vertreten durch dessen Präsidenten, 1975.

¹⁵² According to Luxbacher, the German Federal Ministry of Economics presented DIN with a choice between a revision of DIN 820-1 that would better protect the representation of consumer interests or a reinforced government regulation of standardization. DIN chose the former. LUXBACHER, *supra* note 148, at 412. Böttger on the other hand describes the revisions to DIN 820-1 not as changes but as a formal consecration of DIN's long-held standards development principles. He argues that these principles were previously not sufficiently known to the public, leading to unfounded suspicions, in particular, of a one-sided representation of particular interests. L. Böttger, *Ursachen und Wirkungen des Vertrages zwischen der Bundesrepublik Deutschland und dem DIN Deutsches Normungsinstitut e. V.*, in DIN DEUTSCHES INSTITUT FÜR NORMUNG E.V. (HRSG.), TECHNISCHE NORMUNG UND RECHT 31 (1979), *cited in* HELMUT VOELZKOW, PRIVATE REGIERUNGEN IN DER TECHNIKSTEUERUNG: EINE SOZIALWISSENSCHAFTLICHE ANALYSE DER TECHNISCHEN NORMUNG (1996).

¹⁵³ The previous version these principles from 1950 makes no reference to a balance of interests or to equivalent or related procedural principles.

provides a long, but non-exhaustive list of interests to be considered, such as users, government authorities, universities and colleges, commerce, crafts, insurance, industrial manufacturers, testing institutes, and others. Over time, this list has been expanded to include further interests to be considered, such as environmental groups.

DIN documents also include balance requirements for different aspects of DIN's work. Section 3.3. of the DIN bylaws states that the composition of DIN's presiding board should be balanced between different interest groups. The "Directive for Standardization Committees" (*Richtlinie für Normenausschüsse*) describes the process for creating a standardization committee, including a requirement to invite representatives of all interests to participate. There are no specific quotas for the representation of different interests, but there is a rule that the committee chair and vice-chair should represent different interests.

Despite the formal requirement to balance the representation of different interests, there is ample evidence that even after 1975 the interests listed by DIN 820-1 are not equally represented in DIN standardization committees.¹⁵⁴ Balanced representation of different interests in standardization committees has, however, been recognized by German courts as critical to the legitimacy of standards. In a 1987 decision involving a standard for traffic noise, the Federal Administrative Court (*Bundesverwaltungsgericht*) simultaneously identified the balancing of conflicting interests as critical to the development of a standard, while casting doubt on the possibility that such balancing could be achieved without the intervention of governmental authority.¹⁵⁵ In 1984, the Federal Administrative Court held that a standard for children's beds in hospitals could not be expected to conform to the generally recognized state of the art because the relevant technical committee had failed to hear technical experts from hospitals.¹⁵⁶ Imbalance in the composition of a technical committee could thus result in a standard losing legitimacy and authority as a representation of the technical state of the art.

UK standardization policy has followed a trajectory similar to that of German policy. The BSI is recognized as the NSB of the United Kingdom

¹⁵⁴ VOELZKOW, *supra* note 152, at 230.

¹⁵⁵ "The Technical Committees of DIN are composed in such a way that the necessary technical expertise is at their disposal. Their members, however, additionally include persons representing the interests of certain branches and undertakings. [One] cannot, therefore, understand the results of their consultations uncritically as solidified expertise ('geronnener Sachverstand') or as pure scientific results." 1 HARM SCHEPEL & JOSEF FALKE, LEGAL ASPECTS OF STANDARDIZATION IN THE MEMBER STATES OF THE EC AND EFTA 132 (2000) (quoting translation of Bundesverwaltungsgericht [BverwG] [Federal Administrative Court], May 22, 1987, 77 ENTSCHEIDUNGEN DES BUNDESVERWALTUNGSGERICHTS [BVerwGE] 285 (291)).

¹⁵⁶ Bundesverwaltungsgericht [BverwG] [Federal Administrative Court], Jan. 31, 1984, BE-TRIEBS-BERATER [BB] 1984, 563, *cited in* SCHEPEL & FALKE, *supra* note 155, at 133.

through a 2002 Memorandum of Understanding (MOU) between BSI and the UK government. Similar to the German *Staatsvertrag*, the BSI MOU grants formal government recognition and financial support to BSI, and BSI commits to pursue the public interest, involve relevant government authorities, and uphold certain process principles in its standards development activities. Unlike the *Staatsvertrag*, however, section 8.3 of the MOU explicitly includes a balance-of-interests requirement:

BSI will seek a fair and acceptable balance of all relevant interests in its work and will encourage their full participation in producing British Standards and in formulating the UK position on proposed European and international standards which not only reflect sound and modern technical practice but also take fully into account the commercial needs of both manufacturers and users.¹⁵⁷

BSI thus commits to seek (but not necessarily to achieve) a certain level of balance between all relevant interests. While the MOU does not offer a direct definition or examples of “all relevant interests,” it later focuses on the commercial needs of “both manufacturers and users” (a reference to the interest categories that underpinned the traditional notion of balance of interests in standards development).

The MOU references BSI’s “standard for standards” document BS-0 for more specific standardization principles. BS-0 (in its most recent, 2016 version) lists balance of interests among the defining characteristics of British Standards: “development by balanced and broadly representative standing committees that retain responsibility for them indefinitely, and that reach agreement by consensus.”¹⁵⁸ BS-0 makes its most explicit reference to balance in section 7.1, which describes the principles governing BSI committee work:

BSI has a responsibility to maintain a fair and comprehensive balance of interests within each committee. The nature of the balance necessarily varies from committee to committee, but a committee in which one type of interest has a predominant influence is likely to be regarded as unbalanced. There are areas of work for which it is difficult to achieve representation from a wide range of interest groups. In these cases it is important that representation on a committee is not limited to a single interest. As a general rule, there should be active participation by at least two parties whose interests do not coincide.¹⁵⁹

¹⁵⁷ Memorandum of Understanding Between the United Kingdom Government and the British Standards Institution in Respect of Its Activities as the United Kingdom’s National Standards Body at 10 (June 20, 2002) [hereinafter BSI MOU].

¹⁵⁸ BRITISH STANDARDS INST., A STANDARD FOR STANDARDS—PRINCIPLES OF STANDARDIZATION 4.1.3 (2d ed. 2016).

¹⁵⁹ *Id.* at 7.1.

In addition to being required by the MOU, balanced representation of interests on BSI committees has been seen, including by courts, as critical for the acceptability of BSI standards.¹⁶⁰ Other European NSBs have similar balance-of-interest requirements for their activities. In Italy, “UNI’s Articles of Association provide that each Technical Committee should include an expert appointed by the competent administration and that an adequate balance be arranged between producers and purchasers in the composition of each Technical Committee.”¹⁶¹ This policy thus appears to provide for a balance-of-interest requirement that aligns with the traditional definition of interest groups in standards development.

In France, however, the ministerial order of June 16, 2009, on standardization policy casts a wider net: it provides that the French national organization for standardization will involve all stakeholders in its activities, including specifically consumer associations, trade unions, and representatives of small- and medium-sized enterprises (SMEs), as well as academics.¹⁶²

C. EUROPEAN STANDARDIZATION POLICY: FROM THE “NEW APPROACH” TO REGULATION 1025/2012

Similar to the NSBs in individual European countries, the European Standards Organizations (ESO) originated in the private industrial sector and gradually acquired formal recognition by different European institutions. Current EU standardization policy was born in the early 1980s. As with many EU economic policies, it must be viewed through the prism of the internal market. Standardization is a means of achieving the internal market and of ensuring the success of EU industry, both internally (by enabling firms to achieve greater scale within the EU) and externally (by leveraging EU standards to improve their competitive positions abroad).

Efforts to establish harmonization and mutual recognition of technical standards resulted in a Council Directive in March 1983¹⁶³ and the “New Approach” to standardization in 1985,¹⁶⁴ both of which became building blocks in the large-scale integration project of the Single European Act in 1986. Under the New Approach, instead of harmonizing standards across the European Union via direct legislation, the European Union would issue general

¹⁶⁰ SCHEPEL & FALKE, *supra* note 155, at 107.

¹⁶¹ *Id.* at 106.

¹⁶² Décret 2009-697 du 16 juin 2009 relatif à la normalization [Ministerial Order 2009-697 of June 16, 2009 on Standardization], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], arts. 8 & 14, June 17, 2009, p. 138:6.

¹⁶³ Council Directive of 28 March 1983 Laying Down a Procedure for the Provision of Information in the Field of Technical Standards and Regulations, 1983 O.J. (L 109) 8.

¹⁶⁴ Council Resolution of 7 May 1985 on a New Approach to Technical Harmonization and Standards, 1985 O.J. (C 136) 1.

legislation defining essential requirements with which standard-setting processes must comply and delegate the detailed standardization work to ESOs, at the time CEN and CENELEC.¹⁶⁵

In a 1984 memorandum between CEN, CENELEC, and the European Commission that governs such delegation, CEN and CENELEC committed to ensuring that different “interested circles” would—if they so wished—be effectively associated with standards development.¹⁶⁶ The categories of interests to be considered are a mix of traditional (users, manufacturers) and societal (consumers, trade unions) interest categories. This commitment constitutes “balance as openness,” in the sense that the memorandum does not require CEN or CENELEC to enforce quotas or otherwise remedy an imbalance in the representation of different interests that might arise from the varying degrees to which “interested circles” are willing or attuned to participate in standards development. Rather than ensuring sufficient representation of different interests through quotas, CEN and CENELEC rely on NSBs to foster the involvement of these interests in standardization.¹⁶⁷ The membership of CEN and CENELEC consists of European NSBs, and it is the responsibility of each of these NSBs to represent a national consensus in CEN and CENELEC, taking into account the views of different interests.

This memorandum was subsequently referenced in the Council Resolution of 1985, which established the “New Approach” to European standardization.¹⁶⁸ In the annexes to the resolution, the Council broadened the significance of the balance requirement set out in the memorandum by making it applicable to any body that might be entrusted with the development of harmonized European standards.¹⁶⁹

One such body is the European Telecommunications Standards Institute (ETSI), the third ESO, which was created in 1988.¹⁷⁰ ETSI breaks with the model of CEN/CENELEC, in which stakeholders are represented through

¹⁶⁵ *Id.*

¹⁶⁶ CEN/CENELEC Memorandum No. 4: General Guidelines for Cooperation Between the European Commission and CEN and CENELEC, agreed on Nov. 13, 1984.

¹⁶⁷ See Council Resolution of 4 November 1988 on the Improvement of Consumer Involvement in Standardization, 1988 O.J. (C 293) 1.

¹⁶⁸ See Council Resolution 1985, *supra* note 164.

¹⁶⁹ Council Resolution 1988, *supra* note 167, at 6.

¹⁷⁰ The creation of ETSI was the consequence of the liberalization drive in European telecommunications. See *Commission Green Paper on the Development of the Common Market for Telecommunications Services and Equipment: Towards a Dynamic European Economy*, COM (87) 290 final (June 30, 1987). In the 1987 Green Paper, the European Commission recognized the strategic significance of quick and efficient standardization to open up the European telecommunications market. Standardization efforts had been hampered by the need for coordination between the IT industry, which worked through NSBs within the CEN/CENELEC structure, and the telecommunications sector, where state monopoly providers, acting through the Conférence Européenne des Postes et Télécommunications (CEPT), were responsible for standardization.

their respective NSBs, in favor of direct involvement of stakeholders. From the very start, the EU institutions wanted ETSI to regroup manufacturers and operators.¹⁷¹ Accordingly, companies and other stakeholders can acquire individual membership in ETSI and participate directly in many ETSI processes. ETSI's Directives and Rules of Procedures (ROP) divide individual members into defined categories: "Administrations; Other Governmental Bodies; National Standards Organizations; Network Operators; Manufacturers; Users; Service Providers; Research Bodies; Universities; Consultancy Companies/Partnerships; Others."¹⁷² ETSI's ROP provide for some minimal balance between these categories,¹⁷³ while at the same time vesting the bulk of decision-making power with the largest companies among ETSI's membership.¹⁷⁴

In its 1990 Green Paper on European Standardization, the European Commission pushed for a centralized European standardization system.¹⁷⁵ If such a system were to emerge, however, the ESOs would need to strengthen the representation of non-industrial interests in their processes to ensure that European-level standardization was accountable and legitimate. At the time, CEN and CENELEC relied on NSBs to achieve that representation at a national level, and ETSI comprised mostly industry members.¹⁷⁶ While the Commission proposals for greater centralization were rejected,¹⁷⁷ that policymaking cycle nevertheless resulted in an agreement on a set of principles for ESOs, including transparency, openness, consensus, independence of vested interests, and efficiency.¹⁷⁸ ESOs were also urged to work more closely with "economic and social partners," including SMEs.

¹⁷¹ *Id.* at 112–13.

¹⁷² Eur. Telecom. Standards Inst., ETSI Rules of Procedure art. 1.1 (Apr. 14, 2021) [hereinafter ETSI RoP].

¹⁷³ For example, the chair and vice-chair of the General Assembly should not be representatives of the same membership category, *id.* art. 4.3; the General Assembly may decide to allocate a number of reserved seats on the board to ensure representation of specific categories (e.g., Users or Small and Medium Enterprises), *id.* Annex 7, § 2 (rules governing nomination and election of Board members); and the composition of the Finance Committee should allow for fair representation of the different categories of ETSI members, Eur. Telecom. Standards Inst., ETSI Financial Regulations art. 2.1 (Apr. 14, 2021).

¹⁷⁴ For the purposes of determining membership dues and voting rights, members of certain categories (Small and Medium Enterprise, University, User Association, and Trade Association) are grouped into the lowest class of membership, whereas the dues and voting rights of members in other categories are calculated as a function of their companies' annual turnovers. ETSI ROP, *supra* note 172, Annex 2, § 5 (defining classes of contributions to the ETSI budget).

¹⁷⁵ *Commission Green Paper on the Development of European Standardization: Action for Faster Technological Integration in Europe*, COM (90) 456 final (Oct. 8, 1990).

¹⁷⁶ *Id.* at 35.

¹⁷⁷ The Commission found no support among stakeholders. See *Commission Communication on Standardization in the European Economy*, 1992 O.J. (C 96) 2 (summarizing round of consultations).

¹⁷⁸ Council Resolution of 18 June 1992 on the Role of European Standardization in the European Economy, 1992 O.J. (C 173) 1.

In a report that opened the subsequent policymaking round at the turn of the 21st century, the Commission emphasized accountability.¹⁷⁹ While the Commission did not mention balance as such, in its view accountability required, among other things, that a “standard is supported by all major interested parties,” that “European-based interest groups [have access] to policy setting activities,” and that “all interested parties [can] participate effectively in standardization work, under fair conditions.”¹⁸⁰ Hence, the Commission requested that CEN and CENELEC include European-based workers, consumers, and environmental and industry representatives in “strategic discussions and the elaboration of policy.”¹⁸¹ The Commission’s analysis cites accountability as a distinctive feature that separates ESOs and NSBs from private consortia; for the Commission, the latter operate efficiently but lack legitimacy and accountability.¹⁸²

The European Parliament¹⁸³ and the Council¹⁸⁴ both issued resolutions endorsing the Commission policy proposals. Notably, the Council did not dwell on the traditional notion of balance as parity between the representation or influence of different commercial stakeholder groups. Rather, the Council emphasized the role of *societal* balance, and in particular adequate representation of potentially under-represented interests. Following the Council resolution, the Commission issued a paper exploring the interplay between the European principles set out above and the principles found at the international level under WTO law.¹⁸⁵ The Commission noted that the WTO principles and the European principles are largely similar, yet it added that “it is important . . . to balance the interests not only of industry, but also consumer concerns, health and safety considerations, environment aspects and concerns of . . . SMEs.”¹⁸⁶ The Commission once again explicitly supplemented the traditional notion of balance with the notion of societal balance, to which the Commission invited the WTO (and by the same token international SDOs) to give greater weight.

¹⁷⁹ *Commission Report on Efficiency and Accountability in European Standardization Under the New Approach*, COM (1998) 291 final (May 13, 1998).

¹⁸⁰ *Id.* at 4.

¹⁸¹ *Id.* at 10.

¹⁸² *Id.* at 5.

¹⁸³ European Parliament Resolution of 12 February 1999 on the Report from the Commission, 1999 O.J. (C 150) 624.

¹⁸⁴ Council Resolution of 28 October 1999 on the Role of Standardization in Europe, 2000 O.J. (C 141) 1.

¹⁸⁵ *Commission Staff Working Paper on European Policy Principles on International Standardisation*, SEC (2001) 1296 (July 26, 2001) [hereinafter *Staff Working Paper*]. The working paper was prepared in response to a request from the Council in its 1999 Resolution. The WTO principles are found in Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement, G/TBT/9, Annex 4 (Nov. 13, 2000).

¹⁸⁶ *Staff Working Paper*, *supra* note 185, at 4, 8.

The Council approved the Commission analysis in a subsequent set of conclusions.¹⁸⁷

The European emphasis on societal balance is also reflected in the current version of the CEN-CENELEC Guide 4 of 2003 on the “Cooperation between CEN, CENELEC and ETSI and the European Commission and the European Free Trade Association” (the successor to the 1984 Memorandum).¹⁸⁸ From 1984 to 2003, there were some noteworthy changes in how EU standardization policy approached balance of interests. First, the list of interests changed: more traditional interest groups such as “users” were replaced by societal groups such as SMEs and environmental interest groups, and trade unions were replaced by “workers.” In addition, the European Commission expected CEN and CENELEC to take increasingly proactive steps to achieve greater societal balance.¹⁸⁹ The balance requirement thus shifted from a principle of equal rights to participate to a responsibility to ensure adequate representation, in particular of potentially under-represented groups.

This increased emphasis on societal balance, and the requirement to proactively encourage a balanced representation of different societal stakeholder groups, are reflected in the current version of CEN’s Internal Regulations (applicable to CEN members, i.e., the European NSBs).¹⁹⁰

In the next policy round (2008–2012),¹⁹¹ a European Parliament resolution¹⁹² set the tone for a complete overhaul of the legal framework for standardization in the EU. The strategic study accompanying the proposal for what would become Regulation 1025/2012 reaffirmed the European approach to balance, which focuses on societal balance but also alludes to traditional balance.¹⁹³ The Commission insisted on adequate representation of SMEs, through the NSBs (for CEN and CENELEC) and directly within ETSI. Societal balance was deemed particularly relevant when standards touched upon

¹⁸⁷ Council Conclusions of 1 March 2002 on Standardisation, 2002 O.J. (C 66) 1.

¹⁸⁸ CEN-CENELEC, Guide 4: General Guidelines for the Cooperation between CEN, CENELEC and ETSI and the European Commission and the European Free Trade Association (2d ed. Aug. 2003).

¹⁸⁹ See *id.* at 8 (“Further efforts should be made to increase the participation of interested circles.”).

¹⁹⁰ CEN-CENELEC, Internal Regulations Part 1: Organization and Structure ¶ 3.1 (July 2018).

¹⁹¹ See *Commission Communication: Towards an Increased Contribution from Standardization to Innovation in Europe*, COM (2008) 133 (Mar. 11, 2008); *Commission White Paper on Modernising ICT Standardisation in the EU—The Way Forward*, COM (2009) 324 (July 3, 2009) (initiating the discussions).

¹⁹² European Parliament Resolution of 21 October 2010 on the Future of European Standardization, 2012 O.J. (C 70E) 56.

¹⁹³ *Commission Communication on a Strategic Vision for European Standards: Moving Forward to Enhance and Accelerate the Sustainable Growth of the European Economy by 2020*, COM (2011) 311, at 11 (June 1, 2011); see also *id.* at 5.

public policy, e.g., in the case of product safety or environmental standards. Achieving societal balance in this context involved better representation of consumers, trade unions, and environmental NGOs, among others.¹⁹⁴ In addition, the Commission regarded consortia (which it had considered lacking in legitimacy ten years earlier) as a useful source of complementary standards, as long as they followed the same “quality criteria” as ESOs, including openness, transparency, and neutrality.¹⁹⁵

Regulation 1025/2012, the current legislative framework for standardization in Europe, emerged from the 2008–2012 policy round.¹⁹⁶ The recitals to Regulation 1025/2012 explain that stakeholder representation is essential to the success of standardization.¹⁹⁷ Stakeholders include representatives of environmental interests, consumer interests, employee interests (trade unions in particular), and SMEs. Regulation 1025/2012 governs the participation of stakeholders in standardization.¹⁹⁸ To ensure meaningful participation, the regulation even provides for EU funding of stakeholder organizations for those purposes.¹⁹⁹

Regulation 1025/2012 remains focused on participation in proceedings as a way to ensure representation. It does not require that ESOs grant any particular stakeholders voting rights.²⁰⁰ The only explicit mention of a balance requirement in Regulation 1025/2012 can be found in Annex II, which sets out the conditions under which information and communications technology (ICT) standards developed by SDOs *other than ESOs* can be recognized for public procurement purposes in the EU.²⁰¹ To be considered, a standard must have been developed by a standards body which fulfills a number of criteria, including that “participation of all relevant categories of interested parties was sought with a view to achieving balance.”²⁰²

Over the last 35 years, as outlined in the previous paragraphs, EU standardization policy has had to deal with significant changes in the standardization ecosystem and with the spillover from major EU-level policy debates. While societal balance emerged in national policy discussions as early as the 1960s and 1970s, it became a focus of standardization policy at the EU level in the 2000s and 2010s. The European Union has gone far to ensure that weaker stakeholders are represented not only in standardization processes, but also in

¹⁹⁴ *Id.* at 12.

¹⁹⁵ *Id.* at 15–17.

¹⁹⁶ Regulation 1025/2012 on European Standardization, 2012 O.J. (L 316) 12.

¹⁹⁷ *Id.* rec. 17, 20, 22.

¹⁹⁸ *Id.* arts. 5, 6 & 12.

¹⁹⁹ *Id.* art. 16.

²⁰⁰ *Id.* rec. 23.

²⁰¹ *Id.* art. 13.

²⁰² *Id.* Annex II.3(c)(iii).

SDO governance. In the European Union's view, the main stakeholders whose adequate representation SDOs should ensure are consumers, environmental groups, labor, and SMEs. Since the mid-2000s, EU institutions were forced to acknowledge that standards development—especially in the ICT sector—takes place in large part outside of established SDOs, in industry-driven fora and consortia. Societal balance was then put forward as a key differentiating factor between established SDOs and their newer industry-driven counterparts. Ultimately, standards issued by the latter could achieve recognition within the EU, if they were developed in sufficiently balanced processes as set out in Regulation 1025/2012. Nowadays, one of the main functions of the European Commission's standardization policy and the overarching coordination bodies that it hosts, such as the Joint Initiative on Standardisation (in general) or the Multi-Stakeholder Platform (for ICT standards specifically),²⁰³ is to provide a space where all stakeholders can be represented and heard, and from which SDOs can be prodded to achieve societal balance.

Throughout the different phases of its development, the framework for standardization regulation in Europe has focused on the officially recognized NSBs and ESOs. Just as in the United States, however, industry stakeholders often found it advantageous to create additional fora for standardization. One such organization is the Digital Video Broadcasting (DVB) project, which emerged in 1991 from a joint initiative by broadcasters, consumer electronics manufacturers, and regulatory bodies. Drafting a Memorandum of Understanding (MOU) for DVB “meant that commercial competitors needed to appreciate their common requirements and agendas. Trust and mutual respect had to be established.”²⁰⁴ To foster trust among different interest groups, the MOU creates specific mechanisms to balance their interests. In particular, “to ensure a balanced representation of views from broadcasters, operators, manufacturers and administrations,” the MOU prescribes a specific composition of DVB's central governance body, reserving a specific number of seats for each “constituency.”²⁰⁵ Furthermore, a majority of the representatives of each constituency must approve any DVB decision.²⁰⁶

D. EU COMPETITION POLICY AND BALANCE IN SDO IPR POLICIES

In parallel with the development of EU standardization policy as part of the internal market, EU competition law was also applied to standardization activ-

²⁰³ See Decision of 28 November 2011 Setting Up the European Multi-Stakeholder Platform on ICT Standardization, 2011 O.J. (C 349) 4.

²⁰⁴ *History*, DVB PROJECT, dvb.org/about/history/.

²⁰⁵ Memorandum of Understanding Further Amended and Restated for the Development of Harmonized Digital Video Broadcasting (DVB) Services Based on European Specifications art. 6.1 (Jan. 3, 2014).

²⁰⁶ *Id.* art. 6.4.

ities. Starting with the *X/Open Group* case in 1987,²⁰⁷ the Commission became concerned that firms (or sets of firms) could use standardization to give themselves an advantage over their competitors. The Commission perceived openness and participation as remedies for this risk. Hence, the Commission insisted on ensuring that all interested parties were able to participate in standardization and that all interested manufacturers could access each standard and implement it in their products. The Commission's 2000 Horizontal Guidelines sum up the practice until then: if participation in standardization is "unrestricted and transparent" and the standards are voluntary, then there is no concern under competition law.²⁰⁸ The Commission emphasized participation first and foremost, rather than any more specific definition of balance between stakeholder interests: all competitors must have been involved in the discussion, and other stakeholders should also be at the table.²⁰⁹

With the standardization of mobile telecommunications technology and the creation of ETSI in 1988, the intersection between standardization and IPRs became an important focus of European standardization policy. In its 1992 follow-up communication on the 1990 Green Paper, the European Commission focused exclusively on the interface between standardization and IPR. These policy efforts occurred against the backdrop of debates within ETSI between network operators (who favored strict licensing obligations for SEPs) and manufacturers (who defended the rights of patent owners).²¹⁰ In March 1993, ETSI's General Assembly accepted an IPR policy that was heavily criticized by patent-centric manufacturers. Observers at the time alleged that the policy was only accepted because of an imbalance in the representation of manufacturers' and operators' interests within ETSI.²¹¹ The policy faced significant resistance, including a competition law complaint by a business association representing manufacturers to the European Commission. The European Commission did not decide the merits of the complaint, however, as ETSI revised its policy and abandoned the controversial provisions in November 1994 "in order to achieve greater consensus amongst ETSI members."²¹² ETSI's new IPR policy reflected a commitment to balance: "In achieving this objective, the ETSI IPR Policy seeks a balance between the needs of standard-

²⁰⁷ Commission Decision No. 87/69/EEC, 1987 O.J. (L 35) 36 (*X/Open Group*).

²⁰⁸ Commission Notice, Guidelines on the Applicability of Article 81 of the EC Treaty to Horizontal Cooperation Agreements, 2001 O.J. (C 3) 2, ¶ 163.

²⁰⁹ *Id.* ¶ 172.

²¹⁰ See generally Eric J. Iversen, *Standardization and Intellectual Property Rights: ETSI's Controversial Search for New IPR-Procedures*, in *STANDARDISATION AND INNOVATION IN INFORMATION TECHNOLOGY* (Kai Jakobs & Robin Williams eds., 1999).

²¹¹ Rudi Bekkers, Bart Verspagen & Jan Smits, *Intellectual Property Rights and Standardization: The Case of GSM*, 26 *TELECOMM. POL'Y* 171, 180 (2002).

²¹² Notice Pursuant to Article 19 (3) of Council Regulation No. 17 Concerning Case No IV/35.006, ETSI Interim IPR Policy, 1995 O.J. (C 76) 5.

ization for public use in the field of telecommunications and the rights of the owners of IPRs.” IPR is the only context in which ETSI’s process documents make explicit mention of a balance requirement.

Perhaps mindful of the controversies at ETSI, the DVB project was careful, when developing its IPR policy in the mid-1990s, to balance the leadership of the subcommittees charged with developing an IPR policy between representatives of equipment manufacturers and broadcasters, the two principal commercial constituencies involved in the market.²¹³

The Commission revised the Horizontal Guidelines in 2010, taking into account Commission practice on SDO IPR policies.²¹⁴ The revised guidelines further develop the general analysis set out in the 2000 Guidelines, placing emphasis once again on participation as the principal means of ensuring balance:

In particular, to ensure *unrestricted participation* the rules of the standard-setting organisation would need to guarantee that all competitors in the market or markets affected by the standard can participate in the process leading to the selection of the standard. The standard-setting organisations would also need to have objective and non-discriminatory procedures for allocating voting rights as well as, if relevant, objective criteria for selecting the technology to be included in the standard.²¹⁵

The 2010 Guidelines address the concept of balance in the context of SDOs’ IPR policies. The 2010 Guidelines define a safe harbor for SDOs complying with certain criteria, including a “balanced and clear IPR policy.” The activities of SDOs that comply with these criteria “would normally fall outside the scope of Article 101(1),” i.e., not violate competition law prohibitions against restrictive agreements. The balance to which the Guidelines refers is the balance between the interests of different groups of participants (IPR holders, pure manufacturers, vertically integrated firms) in the IPR policy.²¹⁶ The Commission’s 2017 Communication on SEPs also insists on the need for a “balanced approach” (ten mentions), yet it does not go any further than the 2010 Horizontal Guidelines in defining balance.²¹⁷

²¹³ Carter Eltzroth, *IPR Policy of the DVB Project: Negative Disclosure, FR&ND Arbitration Unless Pool Rules OK, Part 1*, 6 J. IT STANDARDS & STANDARDIZATION RSCH. 21, 30 (2008).

²¹⁴ Eur. Comm’n, Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements, 2011 O.J. (C 11) 1.

²¹⁵ *Id.* ¶ 281; *see also id.* ¶ 295; *id.* ¶¶ 331, 332 (providing examples).

²¹⁶ *Id.* ¶¶ 284–285.

²¹⁷ *Commission Communication on Setting out the EU Approach to Standard Essential Patents*, COM (2017) 712 final (Nov. 29, 2017).

IV. THE MEANINGS OF BALANCE IN STANDARDIZATION

Despite a widespread recognition that some degree of balancing of interests is appropriate and desirable in standards development, the account set forth here in Parts I, II, and III demonstrates that this important feature of standardization has developed along multiple independent pathways, both in the United States and Europe. Variations are observed in both the conceptualization of *whose* interests should be weighed in any effort toward balancing and the standard against which balancing efforts should be legally measured.

A. TYPES OF INTERESTS TO BE BALANCED

1. *Traditional and Societal Balance Categories*

The traditional view of SDO interest balancing involves producers and users of standardized products, such as steel makers and railway companies. This traditional requirement seeks to balance representation of commercial stakeholder groups with direct, yet divergent, interests in a standard. Many SDOs seek balanced representation of these different groups to elicit the relevant technical information and ensure acceptance of future standards by the principal stakeholder constituencies.

More recently, the scope of the traditional notion of balance has been extended to other constituencies, reflecting more diverse commercial relationships in the marketplace. In addition to producers and users, a perceived imbalance between producers and certifiers arose in the *NSS* case,²¹⁸ in which a testing service company, NSS, sued the Anti-Malware Testing Standards Organization, Inc. (AMTSO), an SDO that develops cybersecurity software standards, and several of its members, alleging that they violated the Sherman Act by colluding to develop standards that disadvantaged certain testing vendors and by then refusing to deal with vendors who did not comply with those standards. Despite the diversity of interest categories potentially involved, the traditional balance requirement focuses on situations in which the opposing stakeholder interests are largely corporate and industrial concerns, and the different stakeholders actively participate in standards development.

A broader notion of the need for societal participation in standardization emerged in the 1960s and 1970s. Unlike the traditional balance requirement, which SDOs adopted as a means of ensuring acceptance of their standards by relevant (and powerful) stakeholder groups, the notion of societal balance originated in an external critique of private standards development and an

²¹⁸ Complaint, *NSS Labs, Inc. v. CrowdStrike, Inc.*, Case No. 3:18-cv-05711 (N.D. Cal. Sept. 18, 2018).

effort to legitimize the private assumption of regulatory duties.²¹⁹ While the concern with societal balance in standards development is not limited to any one class of standards, it is heightened with respect to standards that directly affect consumer safety. In addition, the formalization of societal-balance requirements is often linked to the participation of government agencies in standards development and government's use of voluntary industry standards for regulation and other purposes. In Europe, the representation of under-represented societal interest groups in standards development is enshrined in the key enactment governing standardization in the EU, namely Regulation 1025/2012.²²⁰

There is significant variation in the categories that different SDOs and regulatory instruments mention in this regard. Consumers figure prominently among the societal groups whose interests SDOs have sought to include in standardization activities. ANSI and ASTM in the United States and DIN and BSI in Europe are examples of SDOs that offer consumer interests representation in standardization activities and SDO governance. Other societal interests relevant to standardization activities may include environmental interest groups, labor, and science. Nevertheless, policy discussions of SDO balance typically focus on the opposition between industry as a whole and other interests, such as consumers, government, civil society, and labor. The objective of the balance requirement is not to achieve a balance among all identified categories but to prevent one interest—industry—from using standardization to impose its preferences on the rest of society.²²¹ In some policy discussions, industry is sliced into different groups, most notably small and large companies, where SMEs are added to the list of interests that need to be protected against domination of standards by large companies.

Another difference between SDOs and regulatory instruments concerns the means through which they envision achieving desired balance. The traditional balance requirement sought to reconcile the interests of different groups that actively engage in standards development; as noted above, some standards organizations pursued this balance by ensuring that standardization committees included an equal number of experts affiliated with each group. Some proposals made in the 1970s that sought a more general balance of interests in standards development either did not explicitly mention balanced committee composition

²¹⁹ See CATHERINE E. RUDDER, A. LEE FRITZSCHLER & YON JUNG CHOI, *PUBLIC POLICY MAKING BY PRIVATE ORGANIZATIONS: CHALLENGES TO DEMOCRATIC GOVERNANCE* 118 (2016).

²²⁰ Article 5 of Regulation 1025/2012 compels ESOs to achieve representation and participation of all relevant stakeholders in their activities. For that purpose, pursuant to Article 16 of the regulation, the EU budget provides for the financing of European stakeholder organizations representing SMEs, consumers, environmental interests, and social interests.

²²¹ This is also consistent with ASTM's explicit quota requirement, which aims to ensure that representatives of producers do not outnumber representatives of all other groups. See *supra* notes 30–31 and accompanying text.

or expressly described it as an inadequate tool for achieving desired balance. Other proposals, however, explicitly refer to balance in committee composition as a necessary means of ensuring adequate representation.²²²

Extending the traditional practice of balancing committee composition to the more recent, broader sets of societal interests, however, creates fundamental theoretical and practical problems.²²³ Unlike industrial users and producers of standardized products, consumers, labor, or environmental interests have few qualified experts volunteering to represent them in standardization.²²⁴

Moreover, those purporting to speak on behalf of a particular interest category cannot necessarily be trusted to represent all, or even most, members of that category.²²⁵ Even academics and government officials have been accused of representing partisan interests in standardization activities, further eroding the value of this form of representation.²²⁶

Compounding the difficulty of identifying willing, qualified, and unbiased representatives of broader societal-interest categories is the inherent difficulty that such individuals face when trying to participate in many formal standardization activities. These difficulties include the substantial financial and time commitments required to participate, the difficulty of gaining admittance to relevant SDO committees, and the risk that their views, once expressed, will be sidelined or ignored by professional standards-developers.²²⁷

²²² An example of an attempt to enforce adequate representation of societal interests through a quota system is the 1968 report of the Select Committee on Small Businesses of the U.S. House of Representatives: "It is the subcommittee's conclusion that consumer representatives should be in the preponderance on standards committees." H.R. REP. NO. 90-1985, at 181 (1968). The subcommittee's recommendation is a far cry from the actual representation of consumers in standardization processes then and today.

²²³ Robert W. Hamilton, *Prospects for the Nongovernmental Development of Regulatory Standards*, 32 AM. U. L. REV. 455, 462, and 466-68 (1982).

²²⁴ Dieter Ernst, Heejin Lee & Jooyoung Kim, *Standards, Innovation and Latecomer Economic Development: Conceptual Issues and Policy Challenges*, 38 TELECOMM. POL'Y 853, 855 (2014); see also Morris, *supra* note 131, at 8-9 (describing challenges to participation in standards development by public policy advocates). Given this dearth of public expertise in standardization, in some cases, large corporate interests purport to represent consumer interests, as was the case at ANSI, when the Sears Roebuck Corporation sat on its Consumer Council. Hamilton, *supra* note 31, at 1385 n.157. This being said, some standardization activities are driven not by large ICT firms but by interested individuals and non-corporate communities. For example, academics, philanthropic organizations, and members of indigenous communities formed IEEE Working Group P2890—Recommended Practice for Provenance of Indigenous Peoples' Data (standards.ieee.org/project/2890.html), which does not have substantial corporate involvement.

²²⁵ RUDDER ET AL., *supra* note 219, at 155.

²²⁶ FTC 1983 REPORT, *supra* note 64, at 159-60.

²²⁷ See TIM BÜTHE & WALTER MATTLI, *THE NEW GLOBAL RULERS: THE PRIVATIZATION OF REGULATION IN THE WORLD ECONOMY* 222-24 (2011); CARGILL, *supra* note 124, at 108 ("[W]hile the [standardization] process is open to both the rich and the poor, the rich have easier access to it[.]").

Conscious of the difficulties of achieving societal balance through quotas and other formal mechanisms, the European Commission and some SDOs, such as ASTM and IETF, provide financial support to enhance representation of societal interests (e.g., consumers and representatives of developing countries) in relevant standardization activities.²²⁸ Yet these sporadic efforts have not resulted in significant levels of participation by representatives of such constituencies in most standardization activities.²²⁹

2. Vertical versus Horizontal Stakeholder Categories

The categories of interests that SDOs have traditionally sought to balance are vertically related: Producers of standardized products—automotive parts, electrical components, synthetic fibers—are vertically related to the industrial purchasers of those products—manufacturers of cars, computers, and apparel, as well as wholesalers and retailers. These industrial purchasers are likewise vertically related to consumers, workers, environmental interests, and the like. And, in the case of *NSS*, producers of cybersecurity solutions were vertically related to the certifying bodies that assessed their products.

Over the past few decades, however, there have been increasing calls for SDO balance among competing horizontal interests. In some cases, such as *Hydrolevel*,²³⁰ individual firms contended that the standardization process had been skewed in favor of a competitor from the same industry. In other cases, SDO processes were found to be imbalanced between different groups of suppliers producing goods that could be used for the same purpose, such as the steel and plastic conduit manufacturers in *Allied Tube*.²³¹

According to some SDOs, ensuring that the standardization process is not biased in favor of individual firms or technical solutions is the goal of a separate procedural requirement—absence of dominance—which must be distinguished from balance.²³² Nevertheless, other organizations define balance as a state in which “standards activities are not exclusively dominated by any particular person, company or interest group.”²³³

²²⁸ See Hamilton, *supra* note 31, at 1384; *supra* notes 133–134 and accompanying text.

²²⁹ See BÜTHE & MATTLI, *supra* note 227, at 222 (“[C]onsumer participation in international product standardization . . . is strikingly weak[.]”); JRC REPORT, *supra* note 2, at 120.

²³⁰ See *supra* notes 76–79 and accompanying text.

²³¹ See *supra* notes 80–88 and accompanying text.

²³² For example, ANSI’s 2016 Guidance on Balance and Outreach explains: “Balance and a lack of dominance are two distinct considerations. The existence of a balanced consensus body does not preclude the exercise of dominance. Similarly, the existence of a less than perfectly balanced consensus body does not necessarily reflect a process in which dominance automatically occurs.” ANSI Balance Guidance, *supra* note 115, at 2.

²³³ See OpenStand Principles, *supra* note 132.

Disputes over technical choices, and the exclusion of one vendor's solution to the benefit of another's, continue to arise in standards development, as do associated antitrust claims. Such claims were raised, for example, in *Addamax v. OSF*,²³⁴ *TruePosition v. Ericsson*,²³⁵ and *Golden Bridge v. Motorola*.²³⁶ These disputes involved allegations of an imbalance in the standardization process, resulting for example from a partisan exercise of the working group chair function or deliberate "stacking the room" and/or "vote stuffing" by SDO members. But while the plaintiff in each of these cases alleged anticompetitive collusion by members of an SDO, and in some cases by the SDO itself, the issue of SDO balancing of interests was not addressed by the courts in any of these cases.

These disputes raise a concept of balance that differs from the "traditional" requirement to balance the representation of vertically related interest groups. The perceived need to balance representation between manufacturers and users of standardized goods chiefly arose from a recognition that any standard would achieve broad adoption only if it were acceptable to both groups. When the interests of producers and users diverge, a standardization process in which either producers or users lack adequate representation will often fail to yield a standard acceptable to the underrepresented group.

By contrast, with respect to competitors proposing competing solutions for a particular application, the success of the standard results from the fact that users may rely on the standard to inform their adoption decisions.²³⁷ This necessary trust would be undermined by a process that is biased in favor of a particular technical solution, such as a particular conduit material. Nevertheless, a standard resulting from a commercial compromise between competing suppliers of different solutions (e.g., an agreement to recommend electrical conduits with one coat of plastic and one coat of steel), would similarly fail to gain the trust of the market. Rather, standardization processes must offer a forum for the objective assessment of different technical solutions that is *unbiased* with respect to the special interests of competing providers. An unbiased standardization process should not exclude a technical solution merely to favor the interests of some participants. At the same time, it should not withhold a technically justified choice merely to balance rival special interests.²³⁸

²³⁴ *Addamax Corp. v. Open Software Found.*, 152 F.3d 48 (1st Cir. 1998).

²³⁵ *TruePosition, Inc. v. LM Ericsson Tel. Co.* 977 F. Supp. 2d 462 (E.D. Pa. 2013).

²³⁶ *Golden Bridge Techs. v. Motorola, Inc.*, 547 F.3d 266 (5th Cir. 2008).

²³⁷ For example, builders rely on NFPA's standards when choosing fire-proof materials for electrical conduit, and industrial customers rely on ASME's "Boiler and Pressure Vessel (BPV) Code" when choosing safe boiler control devices.

²³⁸ Indeed, as the court noted in *Golden Bridge*, the benefits of standardization would be stifled if fear of liability were to prevent SDOs from choosing from among rival technological solutions. *Golden Bridge*, 547 F.3d at 273.

Indeed, the legitimacy of the process does not result from parity in the representation of different groups of competing producers, but from the fact that no group can make standardization decisions without the support of other constituencies that have no vested interest in any of the competing solutions. Thus, while balancing representation of different interest categories may foster an unbiased environment, balancing the representation of proponents of different technical solutions within the same interest category is not required, as long as none of the competing interests is in a position to dominate the process.

3. IPR Policy Balance

Today, the most high-profile conflicts over SDO balance are not between suppliers of competing technical solutions, but between patent-centric and product-centric firms. As discussed in Part II.N, above, this debate has centered largely on “balance” in SDO intellectual property policies and allegations that one faction or the other has unfairly skewed SDO policies or decisions toward the other faction’s preferred outcome.

Conflicts between patent- and product-centric interests may implicate horizontal balance (or the absence thereof), as patent- and product-centric solutions may compete in the process of standards development. For the most part, however, the debate over IPR policies signifies a return to a vertical notion of balance, where balance is not intended to promote unbiased consideration of competing solutions, but to find a middle ground between the conflicting commercial interests of vertically related constituencies whose relationships an SDO’s decisions may impact. Like the goal of balancing the interests of the producers and users of standardized goods, some SDOs perceive this balance between the interests of patent- and product-centric firms as important, as they consider that their policies need to garner support from both groups of firms for their standards to succeed in the market.²³⁹

Societal balance has moved to the background in these debates. Consumer welfare is frequently invoked—the sides arguing, respectively, that consumers

²³⁹ See, e.g., ITU TELECOMM. STANDARDIZATION BUREAU, UNDERSTANDING PATENTS, COMPETITION & STANDARDIZATION IN AN INTERCONNECTED WORLD 55 (2014). Other SDOs, however, have adopted policies that do not create incentives for the participation of patent-centric firms (e.g., require participants to make licenses to all SEPs available on a royalty-free basis), and some of their standards have achieved broad adoption. For a discussion of SDOs that release standards on a royalty-free basis, see Jorge L. Contreras, *A Tale of Two Layers: Patents, Standardization and the Internet*, 93 DENVER L. REV. 855 (2016). It should be noted that the importance of patent-related incentives for firms’ participation in standards development varies between SDOs and depends on many factors. See Justus Baron, Cher Li & Shukhrat Nasirov, *Joining Standards Organizations: The Role of R&D Expenditures, Patents, and the Product-Market Position* (2019) (unpublished manuscript), papers.ssrn.com/sol3/papers.cfm?abstract_id=3287475.

are better off with lower-priced products or greater incentives for innovation—yet few genuine consumer-oriented organizations have taken an active part in the debate over IPR policies, which is being waged largely between large industrial concerns with differing market strategies and goals.²⁴⁰

Despite these similarities, there are differences between IPR policy balance and stakeholder balance requirements. Stakeholder balance requirements are concerned with a balanced representation of different stakeholder constituencies in a standardization process. More recent discussions of balance in the context of IPR policies emphasize both balance in policy substance and balanced representation of patent- and product-centric firms in the process of developing IPR policies.²⁴¹ Neither of these dimensions fully aligns with traditional balance requirements.

Several legal sources of SDO process balance requirements—such as ANSI's *Essential Requirements*, OMB Circular A-119, and ISO/IEC Guide 59:2019—are explicitly limited to processes for standards development, to the exclusion of processes for the development of SDO policies. While many SDOs seek balanced representation of different interests in governance processes, as evidenced by explicit balance requirements for boards at various European NSBs,²⁴² these practices are not necessarily required by external regulations.

Legal sources requiring IPR *policy* balance—such as OMB Circular A-119 or the Horizontal Guidelines of the European Commission—explicitly focus on the balanced nature of the policy itself, i.e., a focus on a balanced outcome rather than a balanced policy-development process. The notion of policy balance (or balanced substance) is distinct from traditional requirements of balanced representation and, as discussed above, does not find a parallel in the development of technical standards themselves. Nevertheless, the substance of an SDO's IPR policy (independent of the policy development process) may affect participation in the standards development process, and thus may indirectly affect (traditional) balanced representation of different stakeholder constituencies in those processes.²⁴³

²⁴⁰ JRC REPORT, *supra* note 2, at 169.

²⁴¹ For example, the DVB Forum was careful in developing its IPR policy in the mid-1990s to balance the leadership of the subcommittees charged with developing an IPR policy between representatives of equipment manufacturers and broadcasters, the two principal commercial constituencies involved in the market. Eltzroth, *supra* note 213, at 30. On the other hand, allegations have been made that the IEEE-SA process for developing amendments to its IPR policy in 2015 lacked balanced representation among product- and patent-centric firms. *See, e.g.,* Sidak, *supra* note 4.

²⁴² Association Française de Normalisation (AFNOR), the French NSB, is one example. *See* JRC REPORT, *supra* note 2, at 99.

²⁴³ During the Trump administration, the U.S. DOJ repeatedly emphasized the relationship between IPR policy balance and participation in the standards development process. For example,

Independent of an SDO's traditional balance requirements, there may be antitrust and competition law implications for balance, or lack thereof, in the IPR policy development process. Even before the Trump administration's increased emphasis on IPR policies, the U.S. DOJ in its original (2015) IEEE Business Review Letter²⁴⁴ recognized that a revision of an SDO's IPR policy through an unbalanced process may raise antitrust concerns.²⁴⁵

Table 1 below summarizes the different types of SDO balance requirements that we have observed.

B. LEGAL AND POLICY REQUIREMENTS FOR BALANCE

Related to, but separate from, the question of which interests to balance is the question of what SDOs should, or must, do to achieve the desired degree of balance among those competing interests. Several approaches have emerged over the years that vary in terms of their specificity and stringency—the degree to which different behaviors are prohibited or mandated.

Very generally, balance requirements fall into three categories, defined by their scopes of applicability: (1) requirements that individual SDOs have voluntarily chosen to adopt; (2) requirements that are imposed on only a set of SDOs with a privileged status in their countries or regions, or requirements governing whether an SDO may qualify for certain advantages, such as accreditation, government use of its standards, or antitrust-liability protections; and (3) requirements that apply to all SDOs as a matter of law. Balance requirements in the first category can be very specific and stringent, while requirements in the second category are usually general and flexible. Requirements in the third category are even more general than those in the second, and both European and U.S. law offer only limited guidance on their substance.

These categories are largely orthogonal to the types of balance discussed in Part IV.A. Each type of balance discussed in Part IV.A—vertical balance,

the DOJ stated in its 2020 supplemental letter relating to IEEE's 2015 policy change: "Balance is therefore important not only to encourage participation and competition among patent holders in the standard-setting process, but also to ensure more significant antitrust concerns do not arise. The rules that govern standard setting activity should be unbiased in order to maximize participation and to allow SDOs to achieve the best technical solutions in their standards." DOJ IEEE Update Letter, *supra* note 142, at 11. The DOJ's 2018 letter to ANSI similarly cautioned, "If an SDO's intellectual property rights policy is too restrictive for one side or the other, it also risks deterring participation in procompetitive standard setting." DOJ ANSI Letter, *supra* note 142.

²⁴⁴ Letter from Renata B. Hesse, Acting Assistant Att'y Gen., U.S. Dep't of Justice, to Michael A. Lindsay, Esq., Dorsey & Whitney LLP (Feb. 2, 2015) [hereinafter DOJ 2015 IEEE Letter].

²⁴⁵ *See id.*

TABLE 1:
DIFFERENT TYPES OF SDO BALANCE REQUIREMENTS

Type of balance	<i>Vertical balance</i>		<i>Societal balance</i>	<i>Horizontal balance</i>
Description	Balance between vertically related interest groups (e.g. producers, users)		Balance among stakeholders (e.g., consumers, environmental groups, employees)	Balance between competing technological solutions
Timeline	Since the 19th century; dormant for second half of 20th century	Resurgence now in context of IPR policies	Since the 1960s	Since the 1980s
Theory of harm	Standardization in a given SDO is used as a means for one interest group to collude to gain an advantage over the other in a situation where the standard is compulsory or there is no alternative to the SDO as a forum for standardization	Policy development in a given SDO is used as a means for one interest group to collude to gain an advantage over the other in a situation where the standard is compulsory or there is no alternative to the SDO as a forum for standardization	Standardization is used as a means for industry to benefit at the expense of consumers, the environment, workers, or other societal interests	Standardization in a given SDO is used as a means for the proponent(s) of one technological solution to exclude other solutions without objective (e.g., technological) justification, thus skewing competition between these solutions in the market
Implication for SDO (baseline)	Ensure that interest groups are represented; absence of dominance of standardization processes by a single interest group (e.g., firms with correlated interests)	ensure that resulting policies are balanced	Ensure that stakeholders are represented	Ensure that standardization is carried out objectively on the basis of technical merit; absence of dominance of standardization processes by a single firm or group
More specific initiatives taken by SDOs to address concern	<ul style="list-style-type: none"> Balanced committee composition (quota) Assess support for SDO decisions within each interest group Consensus decision making 	<ul style="list-style-type: none"> Baseline IP policy (disclosure, FRAND commitment) 	<ul style="list-style-type: none"> Aim for balanced representation of stakeholder groups Documented outreach Openness and transparency Support (e.g., financial) for the representation of certain groups 	<ul style="list-style-type: none"> Openness and consensus decision making “Absence of dominance” rules

societal balance, and horizontal balance—is potentially relevant to defining balance requirements in each of the categories noted in the preceding paragraph.

Like distinctions between types of balance, distinctions between scopes of applicability exist in both Europe and the United States. Each region has its own system regulating government use of industry standards: Europe has a system of official recognition of NSBs and ESOs, and in the United States, OMB Circular A-119 requires federal agencies to rely on voluntary consensus standards (i.e., those developed under systems that include balance).²⁴⁶ There are thus notable differences between Europe and the United States regarding the second category of balance requirements, i.e., those applicable to certain SDOs or attached to certain purposes; but there are few indications that balance requirements voluntarily chosen by individual SDOs or balance obligations generally applicable to all SDOs fundamentally differ between the regions.

1. *Most Stringent Level: Specific Balancing Requirements Adopted by Individual SDOs*

At one end of the spectrum are specific balancing requirements adopted by individual SDOs, which can be stringent and explicit. SDOs such as ASTM and DVB, for example, divide their members into categories and specify limits on the number of votes that may be allocated to representatives of each category. These quota policies are imposed purely by choice of the SDO's governing body as representative of its membership.²⁴⁷ These specific balancing processes are clearly not required of all SDOs.

²⁴⁶ See generally Emily S. Bremer, *American and European Perspectives on Private Standards in Public Law*, 91 TUL. L. REV. 325 (2016).

²⁴⁷ See *supra* notes 30–31 and accompanying text. In observing the practical operation of the mandatory quota requirement at ASTM, Professor Robert Hamilton has noted that while formal voting committees at ASTM do, indeed, hew to these quota requirements, much of the detailed standards-development work at ASTM is conducted by smaller expert working groups that largely represent the industrial sector. Hamilton, *supra* note 31, at 1355. Quota requirements present challenges both in defining useful stakeholder categories and ensuring that selected representatives of those categories actually represent the interests of other members of the category. *Id.* What's more, when categories include stakeholders who are diffuse or lack sufficient expertise or financial resources to engage substantively in SDO deliberations, it is often difficult to secure their meaningful participation in SDO activities. See JRC REPORT, *supra* note 2, at 121 (discussing balance in voting requirements at DVB Project and ETSI). Finally, quotas themselves may unfairly skew SDO decision making when the representatives of very small stakeholder groups are given the same voting privileges as representatives of much larger or more technically or economically significant groups. As such, it is not clear that mandatory quota requirements actually achieve their goals, or that such goals are even attainable in a practical sense. Hamilton, *supra* note 31, at 1354–55. Nevertheless, they remain important both historically and in some SDO policies today.

Some SDOs, such as IETF and W3C, intentionally forgo formal balancing measures but seek to achieve stakeholder balance through open and transparent processes and procedures (what we have termed “practical balance”).²⁴⁸ The interests that SDOs choose to balance are often defined by the stakeholders that SDOs view as being critical for the success of their standards—such as the different constituencies of DVB,²⁴⁹ and the IPR holders and implementers emphasized by ETSI’s and ITU-T’s commitments to IPR policy balance.

2. Middle Level: Specific Legal Requirements Applicable to Certain SDOs

At the second level, there are less stringent balance-of-interest requirements applicable to (a large number of) specific SDOs. Private regulatory instruments define requirements for SDOs seeking a certain privileged position, e.g., to develop ANSI-accredited American National Standards or to represent a country’s interests in ISO or IEC. Both ANSI’s *Essential Requirements* and ISO/IEC Guide 59 define balance-of-interest requirements. The requirements defined by ANSI and ISO/IEC, in their current formulations, are less specific than those implemented by individual SDOs such as ASTM (which itself is ANSI-accredited). Nevertheless, these guidelines are intended and designed to be enforceable.²⁵⁰ The balance requirements of ANSI and ISO/IEC are also less stringent than some individual SDOs’ balance requirements; in particular, they emphasize an obligation to seek rather than to achieve balance. The “historical criteria” of balance, i.e., numerical parity of representation of different constituencies on technical committees, are not required by ANSI (even though these criteria are usually viewed as achieving ANSI’s own balance requirements); they are even discouraged by ISO/IEC. Individual SDOs may choose to offer more specific balancing mechanisms and may also choose to seek a desired level of balance exceeding the levels required by ANSI or ISO/IEC.²⁵¹ Both ANSI and ISO/IEC expect SDOs to seek a balance between both traditional and societal interest categories.

²⁴⁸ See *supra* Part II.M.

²⁴⁹ The four constituencies are (1) content providers and broadcasters; (2) infrastructure providers and network operators; (3) manufacturers and software suppliers; and (4) governments and national regulatory bodies.

²⁵⁰ The ANSI Balance Guidance, *supra* note 115, specifies that “ASDs must retain documentation that demonstrates appropriate outreach efforts to solicit a balanced consensus body.” The ISO membership manual lists “Procedures,” “Review,” and “Business Plans” as “typical evidence” to establish that committees represent a balance of interests. Furthermore, “Forms—voting records”; “Membership data—reports”; and “Minutes of meetings” are considered “typical evidence” to assess representativeness or balance of a committee, working group, or mirror committee. Int’l Org. for Standardization, *Membership Manual* 21 (2015), www.iso.org/files/live/sites/isoorg/files/store/en/PUB100399.pdf.

²⁵¹ Using the terminology of the *JRC Report*, these would be “baseline-plus” policies. See *JRC REPORT*, *supra* note 2, at 145–46.

In addition to these requirements defined by private organizations, there are legal obligations applicable to specific SDOs, including Regulation 1025/2012 in Europe and national regulations in some European countries. These legal requirements are the result of formal government recognition by institutions of the European Union or national governments of European countries, for which there is no equivalent in the United States. These instruments often require SDOs to seek societal balance, i.e., allow for sufficient representation of potentially under-represented stakeholder groups and interests, such as consumers, environmental groups, workers, etc., but provide few or no provisions on balance of interests between different groups of industry stakeholders. At least in the view of European policy makers, this emphasis on under-represented societal stakeholder groups is a defining characteristic of the European approach to standardization.

Furthermore, some legal instruments provide benefits to SDOs that have adopted certain balance requirements. In the United States, OMB Circular A-119 and the SDOAA apply to SDOs offering balanced deliberative processes. Neither the Circular nor the SDOAA impose mandatory legal requirements on SDOs or their members. Rather, they create optional sets of criteria that SDOs may adhere to if they wish to take advantage of the benefits offered by those regulatory and statutory schemes. The Circular establishes which SDO-developed standards are suitable for federal government use in its procurement and regulatory functions, and the SDOAA establishes a safe harbor from certain antitrust liability for SDOs that elect to comply with its requirements.²⁵² In Europe, Annex II of Regulation 1025/2012 allows the use of certain standards for public procurement, requiring *inter alia* a balance of interests in the standards development process. Similar to OMB Circular A-119, this does not define an obligation of the SDO, but directs government agencies to use only standards developed by SDOs complying with these criteria.

In addition to being non-binding, balance requirements attached to these statutory or regulatory benefits are very general, and there is no clear mechanism to assess whether SDOs meet the requirements. In the EU, it is the role of the Multi-Stakeholder Platform (MSP) to determine whether individual standards comply with the criteria of Annex II, but the MSP does not accredit or evaluate SDOs or their processes. In the United States, there has been a conscious policy choice against systematic government review or accreditation of private SDOs or their standards. Certain benefits under the SDOAA are predicated on an open registration system. In *NSS*, the DOJ urged the court to test whether AMSTO complied with the procedural requirements un-

²⁵² As noted above, compliance with the SDOAA triggers use of the “rule of reason” approach to antitrust analysis and excludes treble damages for an antitrust violation.

derlying the SDOAA, but the antitrust complaint was dismissed before any substantive adjudication of these issues.²⁵³

Given the generality of these requirements and the scarcity of formal reviews of SDO processes, the specific degree of balance that they require remains open to interpretation. The rules generally emphasize openness as a condition of balance. The earliest formulation of OMB Circular A-119, as well as Annex II of Regulation 1025/2012, furthermore call on SDOs to “invite” or “seek” participation from diverse parties or interest groups, echoing ANSI’s requirement of active outreach. The current version of the Circular, calling for “meaningful participation from a broad range of parties” and prohibiting dominance by a single interest, seems to be more open and appears intended to encompass both ANSI’s definition of balance, as well as SDOs that rely on general openness and transparency for stakeholder balance.²⁵⁴

The balance requirements encapsulated in OMB Circular A-119 (and by extension the SDOAA) and the trajectory of European standardization regulation leading to the current formulation of Regulation 1025/2012 largely emanate from an external critique of the effective power of private SDOs by advocates of consumers, small businesses, and environmental interests. At least historically, these requirements are thus primarily associated with societal balance. Nevertheless, over time, their scope has been extended to encompass IPR policy balance, for example.

As noted in Part I, another source of SDO balance requirements is international trade law. The very general balance requirement under the TBT Agreement, most specifically defined by the TBT Committee decision of 2000, is part of the TBT’s “Code of Good Practice.”²⁵⁵ The Code of Good Practice “is open to acceptance by any standardizing body within the territory of a Member of the WTO,” and does not impose any direct obligations on private SDOs. It requires that countries that are members of the TBT Agreement “shall take such reasonable measures as may be available to them to ensure that local government and non-governmental standardizing bodies within their

²⁵³ Complaint, *NSS Labs, Inc. v. Crowdstrike, Inc.*, Case No. 3:18-cv-05711 (N.D. Cal. Sept. 18, 2018).

²⁵⁴ The OMB explains that it intended its definition of balance to be “consistent” with ANSI’s *Essential Requirements* (which differentiate balance from dominance), while also expressing agreement with other commenters, stating that “a key objective of ‘balance’ is preventing a single interest from dominating the decision-making process.” OMB Circular A-119 (2016), *supra* note 120, Supplementary Information, Discussion and Responses to Significant Comments at 9. This underscores the OMB’s intention for the definition to “allow for flexibility how balance is determined.”

²⁵⁵ TBT Code of Good Practice, *supra* note 18. *See supra* Part I.B.

territories . . . accept and comply with this Code of Good Practice,”²⁵⁶ a requirement applicable to their respective standardization regulations as outlined above.

3. *Least Stringent Level: Legal Requirements Applicable to All SDOs*

At the third level, competition law defines a minimum level of balance required of all SDOs. To a large degree, SDOs allow competitors to come together to engage in behavior that replaces market competition. As such, this collective behavior must be policed by antitrust and competition law. As recently noted by the DOJ,

Without the disciplining effect of competition, collaboratively set standards may serve the interests of the most powerful participants in the process, to the detriment of consumers. . . . [T]he standard-setting process may risk anticompetitive outcomes, if proper safeguards are not practiced by the standard setting organization to ensure that the participants represent the market interests as a whole.²⁵⁷

These required safeguards comprise an obligation to ensure at least some level of stakeholder balance during standards development. Clearly, the intentional unbalancing of SDO deliberations—“stacking the private standard-setting body with decisionmakers sharing their economic interest in restraining competition”²⁵⁸ (*Allied Tube*)—is sanctionable under the antitrust laws. This is a minimum requirement for all SDOs—facilitating an intentional imbalance in SDO decision-making processes in view of restraining competition is prohibited to all.

There are some indications that, in addition to refraining from intentionally biasing the process, SDOs may also have to undertake at least some active steps to provide for a certain minimum level of balance. In *Hydrolevel*, the Supreme Court recognized the general principle that SDOs may be liable for anticompetitive conduct of SDO participants, as the SDO itself is best positioned to adopt procedures that minimize the risk of anticompetitive conduct.²⁵⁹ Nevertheless, it did not elaborate on what specific procedures SDOs must adopt or possess to prevent violations of antitrust laws. In its Final Staff Report of 1983, the FTC built on the Supreme Court’s decision in *Silver v New York Stock Exchange*²⁶⁰ to develop some general procedural principles required of any standardization process capable of producing restrictive effects, including notice, the opportunity to file a complaint to the SDO, and the

²⁵⁶ *Id.*

²⁵⁷ DOJ GSMA Letter, *supra* note 8, at 4.

²⁵⁸ *Allied Tube & Conduct Corp. v. Indian Head, Inc.*, 486 U.S. 492, 511 (1988).

²⁵⁹ *Am. Soc’y of Mech. Eng’rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556, 573 (1982).

²⁶⁰ 373 U.S. 341 (1963).

right to a written response.²⁶¹ In *Allied Tube*, the Supreme Court affirmed that “private standard-setting by associations comprising firms with horizontal and vertical business relations is permitted at all under the antitrust laws only on the understanding that it will be conducted in a nonpartisan manner offering procompetitive benefits.”²⁶² Overall, the acceptability of SDOs under antitrust laws is premised on a minimum level of due process and lack of bias, which may be compromised by extreme imbalances in the representation of different interests. Nevertheless, there is no general definition of what minimum balance level is generally required of SDOs, and especially in the United States, there has been a conscious policy choice against providing such a general definition.

It is clear however that the traditional (“historical”) balance requirements practiced by some SDOs, the institutional norms embodied in the requirements of ANSI, CEN, and ISO/IEC, or regulatory instruments conferring specific advantages to certain SDOs (such as OMB Circular A-119, the SDOAA, Regulation 1025/2012, and the European Commission’s Horizontal Guidelines) are not compulsory as a matter of competition or antitrust law. Providing for balance in line with these more specific (and potentially more stringent) requirements is often seen as helpful for SDOs to comply with their basic obligations under competition law—it may confer a presumption of compliance and offer the SDO protection against liability for abuses committed by individual participants. Failure to comply with any of these requirements alone, however, is not an antitrust or competition law violation.

The minimum level of balance required of all SDOs as a matter of antitrust law thus falls somewhere between the abusive and clearly illegal tactics alleged in *Allied Tube*—packing the room with unqualified voters, paying for individuals to attend SDO meetings solely for the purpose of voting, or otherwise corrupting the legitimate deliberative process—and the affirmative balance requirements attached to Circular A-119, the SDOAA, Regulation 1025/2012, and the Horizontal Guidelines.

In addition, the antitrust laws do not seem to require SDOs to adopt specific processes or policies for the balancing of interests. Rather, the antitrust laws define a floor for the effective balance (or lack of bias) that SDOs’ processes must possess. While some SDOs view balanced committee composition (which may be achieved by reserving participation to groups of equal size from different interest categories, or through active outreach to under-represented groups) as necessary to achieving effective balance, numerically balancing representation of different interests alone (i.e., through quotas) is not a

²⁶¹ FTC 1983 REPORT, *supra* note 64, at 338–59.

²⁶² *Allied Tube*, 486 U.S. at 506–07.

sufficient guarantee for effective balance. Even numerically balanced standards committees may be unbalanced, e.g., because of a biased exercise of the chair function, imbalances in the technical capabilities of different interests' representatives, or imbalances in representatives' ability to commit time and effort to committee activities.

Moreover, numerical balance in the representation of different interests is not always necessary for achieving an effective balance of interests. Most standards committees make decisions by consensus, rather than vote. Under many SDO definitions of consensus, consensus decision making may explicitly protect any significant interest category from being outvoted by other interest categories.²⁶³ Provided that participation in a committee is truly open, the relevant interest categories have the means of ensuring sufficient representation to make their sustained opposition to a particular decision heard, and if the SDOs' officers duly register the absence of consensus, open and consensus-based processes will generally achieve balance even in the absence of a separate requirement to balance committee composition.²⁶⁴ In contrast, parity in the representation of different interests is most relevant for those committees that are not open to an unrestricted number of participants, in particular where such committees reach decisions by vote.

It seems likely that the minimal balance requirements under generally applicable antitrust laws will be applied differently from one SDO to the other. The Supreme Court decisions in *Hydrolevel* and *Allied Tube* concerned safety standards—a set of standards for which an imbalance in the representation of different interests has traditionally been seen as particularly problematic (as evidenced, e.g., by the distinction historically made in this regard by ANSI). Also, in both of these cases, the voluntary standards developed by private SDOs acquired binding effects, e.g., through their influence on governmental regulation. The effective power that SDOs such as NFPA and ASME wield over entire industries warrants particular antitrust scrutiny²⁶⁵ but also sets these SDOs apart from numerous smaller and less established consortia that are arguably less capable of producing restrictive effects. The Horizontal

²⁶³ For example, ISO/IEC Guide 2 defines “consensus” as “general agreement, characterized by the absence of sustained opposition to substantial issues *by any important part of the concerned interests* and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments” (emphasis added), whereas IEEE’s definition of consensus even more explicitly refers to agreement across different interest categories: “Consensus is established when, in the judgment of the IEEE SA Standards Board, substantial agreement has been reached by directly and materially affected interest categories.” See JRC REPORT, *supra* note 2, at 121–23 (discussing consensus versus voting).

²⁶⁴ This is the approach adopted by IETF, as discussed in Part II.M, above.

²⁶⁵ “ASME wields great power in the Nation’s economy. Its codes and standards influence the policies of numerous States and cities. . . . ASME can be said to be ‘in reality, an extragovernmental agency which prescribes rules for the regulation and restraint of interstate commerce.’” *Am. Soc’y of Mech. Eng’rs v. Hydrolevel Corp.*, 456 U.S. 556, 570 (1982).

Guidelines of the European Commission draw a similar distinction between different SDOs, noting that “in the absence of market power, a standardisation agreement is not capable of producing restrictive effects on competition.”²⁶⁶ Only those SDOs capable of producing restrictive effects are invited to adopt certain standardization process principles (such as a balanced IPR policy) in order to benefit from the Horizontal Guidelines’ safe harbor provisions.

The DOJ’s 2019 investigation of GSMA sheds additional light on the balance requirements applicable to all SDOs as a matter of antitrust law.²⁶⁷ In this matter, the standardization process criticized by the DOJ appeared to be unbalanced, offering one class of companies (operators) privileges and influence over the standardization process that were not available to other GSMA members (technology providers). Unlike *Allied Tube*, however, this imbalance allegedly resulted from members’ exercise of their rights under the SDO’s unbalanced policies, rather than the collusion of some SDO members to usurp the standardization process. Even though GSMA is not bound by any specific balance requirements other than those applicable to all SDOs, it accepted the DOJ’s demand to revise its policies and balance the rights of its operator and other members, thus highlighting the potential for antitrust enforcement to correct imbalances in standardization processes beyond those resulting from clearly illegal tactics violating the letter and the spirit of the SDO’s own policies.²⁶⁸

A similar spectrum of requirements defines the concept of “policy balance” and the balancing of interests among “patent-centric” and “product-centric” firms. Individual SDOs have chosen—sometimes encouraged or directed by regulatory authorities—to require their IPR policy to balance these competing interests. Furthermore, regulatory instruments reserve certain advantages to SDOs offering balanced IPR policies, such as the competition law safe harbors provided by the SDOAA and the European Commission’s Horizontal Guidelines and the regulatory advantages offered by OMB Circular A-119 and Regulation 1025/2012. In contrast, the general requirements applicable to all SDOs as a matter of general antitrust and competition law are significantly less stringent and less specific. That being said, as in the case of balance of representation, SDOs that wish to impose greater degrees of balance between different categories of industrial producers may do so, so long as those requirements do not themselves amount to abusive or anticompetitive practices.

Table 2 below summarizes the range of different SDO balance requirements based on these observations.

²⁶⁶ *Commission Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements*, 2011 O.J. (C 11) 1, ¶ 277.

²⁶⁷ See DOJ GSMA Letter, *supra* note 8.

²⁶⁸ See *id.*

TABLE 2:
LEGAL AND POLICY REQUIREMENTS FOR SDO
BALANCE

Tier	Balance Requirement	Description	Examples	Applies to
1	Lack of bias	Prohibits “stacking” SDO processes with stakeholders sharing an interest in stifling competition or otherwise biasing process	<i>Allied Tube, GSMA</i>	All SDOs
2	Non-domination	No single interest should dominate the standardization process	SDOAA, OMB Circular A-119	SDOs wishing to take advantage of statutory benefits under SDOAA and OMB Circular A-119
3	Practical balance	SDO processes are practically balanced, e.g., because they are open to any interested party and rely on consensus decision making	IETF, OpenStand principles	Any SDO wishing to adopt an open-door policy; SDOs seeking recognition of their standards as state of the art
4	Obligation to seek balance	SDO must take affirmative steps to ensure balance	ANSI Essential Requirements; BSI MoU; CEN Guide 4; Regulation 1025	SDOs that wish to be accredited by ANSI; SDOs formally recognized by certain European governmental bodies
5	Numerical balance (e.g., quotas)	SDO voting committees must satisfy numerical balance requirements (or majority approval by each interest category is required)	ASTM; DVB; Governance bodies of certain European NSBs	SDOs that desire sufficiently equal representation by identified stakeholder categories
6	Policy balance	SDO policies should reflect a balanced treatment of different stakeholders categories (e.g., patent-centric and product-centric)	ETSI; EC Horizontal Guidelines; OMB Circular A-119	SDOs seeking to offer a balanced IPR policy; SDOs wishing to benefit from Safe Harbor under EU Competition Law and regulatory benefits under OMB Circular A-119

V. CONCLUSION

Balance in SDO decision making is an expected and important aspect of collaborative standardization. This traditional feature of the standards-development process has important implications for the acceptability of standardization agreements under antitrust and competition law in the United States and Europe. Standardization activities that balance the interests of different groups of actors and prevent any one group from dominating the decision-making process are less likely to produce anticompetitive effects. While antitrust law does not prescribe any standardization principles or even specific standardization processes that SDOs are generally required to adopt, courts and agencies enforcing the antitrust laws have often recognized the procompetitive benefits of standardization processes that follow widely accepted due process principles, including balance.

Our historical review of international, U.S., and EU law illuminates distinctions between different notions of balance. “Traditional” balance concerns the industrial interests directly and actively involved in standardization. Within it, a distinction can be made between vertical balancing—where an SDO must avoid situations in which groups of actors with similarly situated interests gain an undue advantage over others, whether in standardization or policy making processes—and horizontal balancing, where the proponents of one technological solution use the SDO to exclude competing solutions without justification. Beyond “traditional” balance, “societal” balancing has also emerged as a concern: it is defined as the balance among a broader set of stakeholders, including not only industry, but also consumers, workers, and environmental groups, among others. Both “traditional” and “societal” notions of balance are primarily concerned with balanced representation of different interests in an SDO decision-making process. In the more recent debates over balance between patent- and product-centric firms, however, the notion of balance refers to both the balanced representation of the different stakeholder groups in the processes for developing SDO IPR policies and the substantive balance of IPR policies themselves.

In addition to different notions of balance, there is a wide variety of standardization processes capable of producing balance. Historically, SDOs have often sought to ensure numerical balance in the representation of different interest groups in their processes. Such requirements of numerical parity (quotas) have become less common, as many SDOs rely on openness and consensus decision making to prevent any one stakeholder constituency from being outvoted by another. While not necessarily achieving parity in participation, many SDOs continue to encourage active participation by potentially underrepresented groups, and active outreach to such groups is a requirement for many SDOs. Some SDOs such as IETF, however, impose no such balance

requirement, relying instead on openness and transparency to achieve what we have called “practical balance.”

As our analysis demonstrates, SDOs can find different ways of achieving balance in their internal processes, some of which might not include explicit balancing requirements. What matters ultimately under antitrust and competition laws is whether harm to competition has resulted, in the sense that one set of stakeholders has been able to use the standard-setting process to inflict anticompetitive harm. Balance among different interests in standards development—independent of the specific processes used to achieve that balance—can make such an outcome less likely, and thus reduce the risk that SDOs or their members will face liability for antitrust and competition law violations.

