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Balance Requirements for Standards Development Organizations: A Historical, Legal and Institutional Assessment

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BALANCE REQUIREMENTS FOR STANDARDS DEVELOPMENT ORGANIZATIONS: A HISTORICAL, LEGAL AND INSTITUTIONAL ASSESSMENT

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ABSTRACT

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. These requirements arise from numerous sources including antitrust law, international trade law, public procurement requirements and institutional norms. Yet balance criteria lack a generally-accepted definition and the manner in which they are implemented varies, sometimes dramatically, among SDOs. Recently, there has been a renewed interest in the principle that SDOs should ensure a balance of interests among their stakeholders, including in the development of intellectual property rights policies. This article explores the origins and meaning of the balance requirement for SDOs and identifies distinct modalities in which balance requirements are imposed, as well as existing antitrust and competition law requirements surrounding SDO balance.

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I. INTRODUCTION

Non-governmental standards-development organizations (SDOs) have operated in the United States and Europe for more than a century, serving as neutral fora for the collaborative development of technical interoperability standards and protocols. In order to achieve broad acceptance and legitimacy of their standards, SDOs have long sought some degree of “balance of interests” among different interests, typically encouraging active participation by product manufacturers, product users and unaffiliated experts.¹ Conversely, courts and antitrust enforcement agencies have come to view a lack of balance among participants in standard-setting activities as undesirable and sometimes of legal concern. Accordingly, balance requirements have been embodied in the policies of most major SDOs – one of several “due process” features that, along with openness, consensus decision making and an appeals process, seek to ensure the overall fairness of the standardization process. Similarly, a significant number of public regulations list balance among the procedural features of standards development that SDOs are expected to follow. Today, balance requirements are an accepted feature of SDO organization, and most stakeholders view them as desirable.²

But what does “balance of interests” mean in an SDO comprised of self-selected volunteer participants – both individuals and organizations – and how can (and should) it be achieved? In this article, we explore the history of SDO balance requirements, as well as the legal and institutional implications of different interpretations of this important principle.

The remainder of this article is organized as follows. In Part II, we discuss the origins of balance requirements in the international standardization movement, then move in Parts III and IV to chart the development of balance requirements in the United States and the European Union. In Part V, we offer a comparative analysis of different balance requirements along two different axes: the types of interests that should be balanced, and the level of balance that SDOs are expected or required to seek or achieve.

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*, JRC Science for Policy Report EUR 29655 at 119 (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”).

II. ORIGINS AND EVOLUTION OF BALANCE REQUIREMENTS IN INTERNATIONAL STANDARDIZATION

Standards generally fall into one of three broad categories: measurement, performance and compatibility.³ Measurement standards establish uniform systems for measuring quantities of all kinds – length, mass, speed, temperature, electrical resistance, the cut, clarity and carat ratings of gemstones, etc. Measurement standards are among the oldest standards in the world, and have traditionally been developed by governmental actors seeking to facilitate trade and commerce both within and outside of their jurisdictions.⁴ Performance standards establish minimum criteria for a product, service, individual or organization – from automotive emissions to food storage to legal competency; standards like these are intended to achieve goals such as health and safety, environmental protection and public trust. As such, they have often been established by governmental actors, but also by trade and professional associations.

Our focus is mostly on the third category – standards that are intended to promote the compatibility of products and services offered by different vendors. Government-sponsored efforts to standardize industrial components such as parts for firearms and railroad tracks have been documented since the late eighteenth century.⁵ But large-scale movement toward the standardization of industrial components, which was largely a private sector phenomenon, did not occur until the late nineteenth and early twentieth centuries. Commercial pressure toward standardization arose from two related but distinct sources. In the first, dominant entities such as the U.S. military, Ford Motor Co. and AT&T found it beneficial for their suppliers to produce parts that were standardized and interchangeable – features that enabled more efficient procurement and reduced production costs. The second emerged from a desire for greater international harmonization and cooperation among groups of engineers – the “international” standardization movement documented by JoAnne Yates and Craig Murphy in their comprehensive history *Engineering Rules*.⁶ The earliest balance requirements of SDOs originate in this movement.

A. EARLY INTERNATIONAL STANDARDIZATION ORGANIZATIONS

The earliest standardization organizations in Europe and the United States arose at the end of the 19th century from private sector initiatives.⁷ 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 their respective interests. As a result, when the International Association

³ See, e.g., ANDREW L. RUSSELL, OPEN STANDARDS AND THE DIGITAL AGE: HISTORY, IDEOLOGY, AND NETWORKS 17-18 (2014).

⁴ See, e.g., STEVEN M. SPIVAK & F. CECIL BRENNER, STANDARDIZATION ESSENTIALS: PRINCIPLES AND PRACTICE 7-11 (2001) (briefly noting historical examples); KEN ALDER, THE MEASURE OF ALL THINGS: THE SEVEN-YEAR ODYSSEY AND HIDDEN ERROR THAT TRANSFORMED THE WORLD (2014) (history of the creation of the metric system of weights and measures during the 18th century).

⁵ See SPIVAK & BRENNER, *supra* note 4, at 10-12.

⁶ YATES & MURPHY, *supra* note 1.

⁷ For an overview of the historical development of international standardization, see *id.*

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.”⁸ 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.⁹ 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 1906.¹⁰ 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.¹¹ 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.

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 international level capable of imposing procedural principles on SDOs. One exception is the World Trade Organization’s (WTO) Agreement on Technical Barriers to Trade (the “TBT Agreement”).¹² The TBT Agreement largely mirrors the provisions of the 1979 Technical Barriers to Trade Agreement made under the previous Tokyo Round of the General Agreement on Tariffs and Trade (GATT).¹³ Each TBT Agreement includes provisions designed to ensure that national standards will not be used as non-tariff barriers to trade in goods and services. Like the rest of the WTO Agreement resulting from the Uruguay Round, the TBT Agreement was adopted in 1994. Unlike its predecessor, it included an annex titled “Code of Good Practice for the Preparation, Adoption, and Application of Standards”.¹⁴

The Code of Good Practice focuses on aspects of standards development that are directly relevant to international trade. It does not provide for 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 that governs the TBT Agreement, which invites SDOs to adopt “procedures for soliciting input from a wide range of interests”, and notes that “Bodies 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

⁸ YATES & MURPHY, *supra* note 1, at 43 (quoting Proceedings of the ASTM 1, no. 7 (1900), p.76).

⁹ *See id.* at 45 (“Similar membership policies would be adopted by other standardizing bodies subsequently, as would the policies around balance of producers and consumers of materials.”)

¹⁰ YATES & MURPHY, *supra* note 1, at 66-67

¹¹ *Id.* at 69-71.

¹² Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 120.

¹³ Agreement on Technical Barriers to Trade, Apr. 12, 1979, 1186 U.N.T.S. 276,

¹⁴ Agreement on Technical Barriers to Trade, *supra*, note 12, Annex 3 at p. 138.

create unnecessary obstacles to trade.¹⁵ 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 their own “Code of good practice for standardization”, ISO/IEC Guide 59:1994 (Guide 59). 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 private organizations 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 for balanced representation of interest categories such as producers, buyers, consumers, etc.” Similar balance requirements apply to NSBs representing the 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”.

The revised language brings the ISO Guide 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).¹⁶ 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.”¹⁷ Through the interpretations of the TBT Committee Decision and the revised ISO/IEC

¹⁵ Decision of the TBT Committee on Principles for the Development of International Standards, Guides and Recommendations with relation to Articles 2, 5 and Annex 3 of the Agreement, Nov. 13, 2000, being Annex 4 to the Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade, G/TBT/9.

¹⁶ The intent to better align Guide 59 with WTO principles is stated in the foreword to the revised Guide: “The first edition of this document predated the existence of both the WTO TBT Committee decision on principles for the development of international standards, guides and recommendations (G/TBT/9, 13 November 2000) and the WTO TBT Agreement’s Code of Good Practice for the Preparation, Adoption and Application of Standards (Annex 3 of the 1995 WTO TBT agreement). The purpose of this edition of this document is to provide recommendations for implementing good standardization practices that are intended to support, but do not replace or supersede, the two WTO TBT Committee documents.” ISO/IEC Guide 59(2019), Foreword, 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.

¹⁷ ISO Guidance for ISO national standards bodies - Engaging stakeholders and building consensus, 2019; available at <https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100269.pdf> (last consulted on December 28, 2020). It is important to note that the guidance nonetheless does not abandon the principle of balanced representation: “Attempts should be made to achieve balance with respect to the composition of the NMC [National Mirror Committee]. Procedures should exist to safeguard against dominance by any stakeholder or stakeholder category”. “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.” Furthermore, balance of interests should be assessed with respect to appropriately defined interest “categories”; at a minimum, SDO should consider the following categories and assess whether they have an interest in the standard:

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 Intellectual Property Rights. 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.”¹⁸

III. EVOLUTION OF SDO BALANCE REQUIREMENTS IN THE UNITED STATES

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

Several prominent standardization efforts in the United States during the late nineteenth and early twentieth centuries were unilaterally undertaken by dominant organizations – the U.S. military, which standardized thousands of mechanical components during World War I, Ford Motor Co., which relied on standardized parts to enable the mass-production of automobiles, and AT&T, the telephone monopoly that standardized many aspects of the U.S. telecommunications infrastructure.¹⁹ Yet the need for standards also became apparent in industries that were not dominated by single players, but which required interconnection and compatibility among competitors’ products and services – railroads, agricultural tools, electrical equipment, and machinery of all kinds. Professional engineering societies emerged as loci for the development of such standards.

Early on, these societies realized that standards development and adoption could be hampered by conflicts among different interest groups, such as producers and users of standardized products.²⁰ In line with the example set by international organizations such as the IATM (and later

Industry and commerce, government, consumers, labour, academic and research bodies, standards application (e.g. testing, certification, and accreditation bodies), and non-governmental organizations. This indicative list of interest categories (especially in conjunction with the examples provided for further illustration) is a clear representation of “societal balance”, as defined in Parts III and IV below.

¹⁸ “Definition of Open Standards”, Definition developed by IPR Ad Hoc Group and endorsed by TSAG at its meeting on 11 November 2005, available at <https://www.itu.int/en/ITU-T/ipr/Pages/open.aspx> (last consulted on December 28, 2020).

¹⁹ See Off. Tech. Assessment (OTA), Global Standards: Building Blocks for the Future at 42-44, OTA-TCT-512, March 1992 [hereinafter OTA 1992 Report]; RUSSELL, *supra* note 3, at 97.

²⁰ For example, the development of standards for railway tracks was hampered by conflicts between railway companies, strongly represented in the American Society of Civil Engineers (ASCE), and steel makers, which dominated the American Institute for Mining Engineers (AIME). Both organizations developed their own standards, reflecting the different companies’ preferences. Over time, the organizations developed processes for taking into account both groups in order to produce successful standards. According to Yates and Murphy, “this focus on the needs of producer and consumer would become a hallmark of private standard setting.” YATES AND MURPHY, *supra* note 1, at 34. Another early field of standardization activities was electrical engineering. When the American Institute of Electrical Engineers (AIEE), formed in 1884, first engaged in standardization, “the point of greatest

the IEC), many early American standards organizations sought to balance the interests of manufacturers, users, and other interest groups.²¹

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)²² – whose membership comprised AIEE, ASME, ASTM, and other leading SDOs of the time along with several US government agencies – required its Sectional Committees to maintain a balance of “producers, consumers, and general interests.”²³ 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.”²⁴

Over time, SDOs such as ASTM International adopted formal policies requiring that technical committees have minimum levels of representation from defined stakeholder categories (usually producers, “consumers”, i.e. users,²⁵ and general interest).²⁶ We refer to these numerical category balancing requirements as “quotas”.

B. TOWARD A U.S. NATIONAL STANDARDIZATION POLICY (1960s-70s)

During the 1960s and 1970s, there was significant growth in legislation requiring environmental, health and safety standards in the U.S. Between 1970 and 1972, the U.S. federal government created several agencies tasked with the development of regulatory standards, including the Environmental Protection Agency (EPA) and the Occupational Safety and Health

contention was whether manufacturers should serve on the committee that would develop the standards. [...] [AIEE president Francis] Crocker, however, took the more pragmatic view that ‘there are three sides to the question, [...], the manufacturer, the purchaser and the consulting engineer, and leaving out any of them you do not necessarily produce any better result’. [...] After some discussion, AIEE appointed a Committee on Standardization composed of men from all three of the constituencies.” *Id.* at 39.

²¹ The American Society for Testing Materials (ASTM) emerged from the American Section of the aforementioned IATM; but acquired institutional independence in 1902 in particular over concerns by the IATM that the American Section undermined the balance between producers and users required under IATM’s policies. By 1902, the new ASTM had overcome concerns by “users” (notably railway companies) that the new ASTM would unilaterally favor the interests of producers (steel makers), in great part by election of a president who represented a railroad (“consumer”) company. YATES & MURPHY, *supra* note 1, at 50

²² AESC was the precursor to today’s American National Standards Institute (ANSI).

²³ Annual Report of the American Engineering Standards Committee 8 (1920) (cited in RUSSELL, *supra* note 3, at 71).

²⁴ *Id.*

²⁵ 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 3, at 54; YATES & MURPHY, *supra* note 1, at 50). Reference to individual consumers is a much more recent phenomenon.

²⁶ ASTM Intl., 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”) and § 3.2.1 (requiring that “Balance 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).

Administration (OSHA). Facing increasing demand for standards with limited staff, agencies such as OSHA increasingly sought to adopt voluntary consensus standards developed by private SDOs.²⁷

At that time, industry-developed standards were subject to criticism by consumer advocates such as Ralph Nader, who contended that such standards were “essentially written by large corporations to exclude competitors from the marketplace, [...] misrepresent hazardous products as safe, [and] boost sales while benefiting only the producer”.²⁸ Small businesses similarly complained that standardization processes were imbalanced and dominated by the interests of large corporations.²⁹ In this context, both representatives of private standards organizations and their critics called for a national standardization policy that would safeguard all interests affected by proposed standards.³⁰ Some SDOs such as ASTM responded by providing funding for the representation of consumer interests in its committees.³¹

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 formalized U.S. standardization policy that could be used as a model in international negotiations.³²

During this period, there were several competing attempts to create a national standardization policy in the U.S. On one hand, some proposed policies aimed at significantly expanding government oversight of private standards development in order to accomplish several goals including the assurance of a balance of interests in standards setting processes. The proposed ‘Voluntary Standards Accreditation Act’ aimed at creating a government-managed accreditation program for standard developers. In support of this accreditation program, the proposed bill provided that

The Federal Trade Commission is directed to establish rules which will bring about uniform standards-development procedures 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,

²⁷ OTA 1992 Report, *supra* note 19, at 55.

²⁸ Ralph Nader, Testimony on the Voluntary Standards Accreditation Act, Hearings on S825, Before the Subcommittee on Antitrust and Monopoly of the Senate Committee on the Judiciary, 1st Sess. 1977 (cited in OTA 1992 Report, *supra* note 27).

²⁹ In 1968, a select committee on small businesses of the House of Representatives issued a report, including a chapter on standardization. The chapter concludes that small business are typically underrepresented in the processing of voluntary industrial standards: “Sponsoring bodies are typically not subjected to any requirement as to the balance of their committees and subcommittees considering this standard. Often it would appear that small businesses, consumers, and other affected interests are not represented.” Final Report of the Select Committee on Small Businesses, House of Representatives, 90th Congress, pursuant to House Resolution 53, at 180.

³⁰ See William T. Cavanaugh, *Needed: A National Standards Policy*, 5 ASTM STANDARDIZATION NEWS, June 1977.

³¹ Hamilton, *Role*, *supra* note 26, at 1384. See Section III.C, *infra*.

³² YATES & MURPHY, *supra* note 1, at 194-95.

suppliers, distributors, employees, environmental and conservation organizations, state and local procurement and code officials, labor, etc.).³³

In spite of being introduced in Congress in both 1975 and 1977, the bill never advanced past the committee stage.

With legislative proposals stalled, there were other attempts to create tighter government oversight of private standardization. Prompted by individual grievances with specific voluntary standards, the Federal Trade Commission (FTC) investigated the procedures of voluntary consensus standardization more generally, and in 1978 issued a *Proposed Rule and Staff Report* finding that “standards development and certification activities have frequently caused or contributed to substantial consumer and competitive injuries.”³⁴ For the authors of the FTC staff report, 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 capable of being, and have been, manipulated by large or established firms at the expense of consumers, small firms, new entrants, and others.”³⁵

In its analysis, the FTC distinguishes 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.”³⁶ In the FTC’s view, existing SDO balance requirements were insufficient to remedy this situation: “Although 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.³⁷

To remedy these issues, the FTC’s 1978 staff report calls for new rules, which would treat the development of standards in violation of clearly defined standardization process principles as “an unfair method of competition and 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).³⁸ In particular, the report recommends that standards developers “provide to all persons equal opportunity to participate in all phases of all standards proceedings”.³⁹ The FTC staff thus appears 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.,

³³ S.B. 825 and H.R. 8184, 95th Cong. (Voluntary Standards Accreditation Act), Sec. 102(b)(1)(c). Hearings Before the Subcommittee on Antitrust and Monopoly of the Committee of the Judiciary of the United States Senate, Ninety-Fifth Congress, First Session on S. 825, 1977.

³⁴ Fed. Trade Comm’n, Standards and Certification – Proposed Rule and Staff Report 3 (1978) [hereinafter FTC 1978 Report].

³⁵ *Id.* at 5.

³⁶ *Id.* at 125.

³⁷ *Id.* at 128.

³⁸ *Id.* at 289.

³⁹ *Id.* at 318.

the quota requirements imposed by ASTM).⁴⁰ 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.”⁴¹

The proposed Voluntary Standards Accreditation Act and the FTC’s 1978 Staff Report were strongly opposed by many industry representatives. Some standards organizations were particularly adamant in their criticism of what they perceived as government encroachment on their processes, with an ANSI representative complaining in a Senate hearing about the “misguided and crusading FTC staff”.⁴² In 1979, ANSI filed a lawsuit opposing adoption of the FTC’s proposed rules.⁴³

Other contemporary initiatives were significantly less intrusive, but nevertheless called for greater government scrutiny of the balance of interests in standards development. Administrative Conference of the United States (ACUS) Recommendation 78-4, adopted in 1978, focuses on the use of existing voluntary consensus standards in federal regulation, and calls on federal agencies to consider the “adequacy of the procedures followed by the organization preparing the standard to assure that: The membership of the technical committee represents a broadly based and balanced array of relevant interests, including, where appropriate, representatives of consumers, labor, small business, and other affected groups, and no single interest has a dominating influence on the committee”.⁴⁴

At the same time, other efforts encouraged greater government deference to the judgment of private SDOs regarding the appropriateness of standardization processes. This approach is exemplified by the 1979 Trade Agreements Act,⁴⁵ under which the U.S. Congress approved the Tokyo Round of GATT, including its TBT Agreement.⁴⁶ The Trade Agreements Act sets forth the principle that - unlike many other countries - the interest of the U.S. in ISO and other private international standards organizations should be represented by private sector organizations, but provides no specific guidance how this representation should be carried out.⁴⁷

⁴⁰ *Id.* at 328 (“The concept of “balance” also may be perpetuated, as was observed above. The proposed rule does not require balance, on the assumption that it is costly and impractical, and that even “balanced” voting does not ensure a principled, nonharmful result. Never the less, within the confines of the written-comment and equal-opportunity-of-participation requirements of S 457.5, the standards developer is free to run its committee and voting as before.”).

⁴¹ FTC Proposed Rule 457.5(c), Federal Register, Vol. 43, No. 236–Thursday, December 7, 1978

⁴² Hearings before the Subcommittee for Consumers of the Committee on Commerce, Science, and Transportation United States Senate 96th Congress First Session on Oversight to Examine the Enforcement and Administrative Authority of the FTC to Regulate Unfair and Deceptive Trade Practices. September 27, 1979, at 289.

⁴³ American National Standards Institute v. FTC, Civ. No. 79-1275 (D.D.C. 1979), filed May 9, 1979.

⁴⁴ Admin. Conf. U.S., *Recommendation 78-4: Federal Agency Interaction with Private Standard-Setting Organizations in Health and Safety Regulation*, RECOMMENDATIONS AND REPORTS 1978 at 6 (1978) [hereinafter ACUS Recommendation]. According to Professor Emily Bremer, the initial OMB Circular was the culmination of a long interagency effort to codify the procurement practices of individual federal agencies (direct communication with Contreras).

⁴⁵ Trade Agreements Act of 1979, Pub.L. 96–39, 93 Stat. 144, July 26, 1979 (codified at 19 U.S.C. Ch. 13).

⁴⁶ *Id.* § 2503(a).

⁴⁷ *Id.* § 2543(b)(2).

C. BALANCE REQUIREMENTS AT ANSI (1960s-70s)

The American National Standards Institute (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 few foreign-based SDOs are accredited.⁴⁹

Concerns over the representation of consumers and other societal groups underlying the different regulatory and legislative efforts of the late 1970s 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 Underwriters Laboratories created a similar council.⁵³

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*.⁵⁴ 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, it 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 addition, the balance requirement for safety standards committees was more stringent: whereas in product standards committees, no category should have a majority; in safety standards committees, no interest category should have more than one third of the committee membership. This distinction suggests that an imbalance between industry and other interests (such as consumers and employees) was seen as less acceptable in the case of safety than product standards.

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

⁴⁹ ANSI, ANSI Membership Roster, <https://myaccount.ansi.org/Membership/membershipRoster.aspx> (visited Jan. 15, 2021).

⁵⁰ Hamilton, *Role*, *supra* note 26, 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), https://www.ansi.org/consumer_affairs/cic?menuid=5#overview.

⁵³ Hamilton, *Role*, *supra* note 26, at 1385, n. 157.

⁵⁴ ANSI, *Procedures for Management and Coordination of American National Standards (1974)* [hereinafter ANSI *Procedures (1974)*]. Prior to this, Professor Hamilton observes that ANSI “made no systematic attempt to ensure compliance with [its] procedural requirements”). Hamilton, *Role*, *supra* note 26, at 1346.

In order to enforce this balance requirement, each committee secretariat was required to submit an initial list of committee members to its standards management board for approval. The board's approval of the committee composition would be based, among other criteria, on the fact "that, where applicable, substantial balance [as defined above] exists among voting representatives".⁵⁵ A similar, albeit less specific, balance requirement also applies to other standards developers seeking ANSI accreditation: the rules specify that accreditation of standards organizations will be based on compliance with criteria including "Balanced membership on each standards committee among those interests having potential concern with the specific project."⁵⁶

These developments in private SDOs played a role in the public debate over the need for binding regulation regarding standardization. Writing in 1982, Professor Robert Hamilton observes that the reason OSHA initially encountered problems in the use of private standards was that it "uncritically accepted a large number of voluntary standards, some of which dated back fifty years or more".⁵⁷ The use of such legacy standards was problematic not only because they may have been technically outdated, but also because they were often developed using inadequate processes. As Hamilton notes, "[t]wenty years ago the [standardization] process was much more secretive and closed, and there was less emphasis on, and concern with, 'balance' and due process."⁵⁸

This view is also reflected in testimony at the 1977 Senate hearings on the Voluntary Standards Accreditation Act.⁵⁹ Few objected to the relevance of the proposed procedural principles, but many questioned the usefulness of a government accreditation program that would duplicate the effective procedures in place for enforcing due process through ANSI.⁶⁰

D. BALANCE AND OMB CIRCULAR A-119 (1976-80)

In 1976, the White House Office of Management and Budget (OMB) proposed a draft policy in the form of a circular memorandum to the heads of executive agencies.⁶¹ The development of

⁵⁵ ANSI Procedures (1974), *supra* note 54.

⁵⁶ ANSI Procedures (1974), *supra* note 54. In 1977, a note was added to this section of the *Procedures*, specifying that "The spirit and intent of 4.8.3 Classification of Representatives shall be used as a criterion". ANSI, *Procedures for Management and Coordination of American National Standards* (1977).

⁵⁷ Robert W Hamilton, *Prospects for the Nongovernmental Development of Regulatory Standards*, 32 AM. U. L. REV. 455, 464 (1982). See also STEPHEN J. BREYER, *REGULATION AND ITS REFORM* 102 (1982) (citing "serious problems" with OSHA's wholesale adoption of large numbers of industry standards, including the promulgation of standards that were antiquated and inapplicable).

⁵⁸ Hamilton, *Prospects*, *supra* note 57, at 465.

⁵⁹ VSAA Hearings, *supra* note 33.

⁶⁰ The Edison Electric Institute e.g. lamented that the bill would "destroy an established private sector organization that is performing these functions effectively". VSAA Hearings, *supra* note 32, at 617. The American Petroleum Institute complained that "The effect of this bill would be to destroy the private sector American National Standards Institute which has successfully performed its role in the voluntary standardization system. ANSI would be supplanted by a government controlled "National Standards Management Board"". *Id.* at 634. The National Society of Professional Engineers stated that "The Federal Government should avoid competition and duplication with ANSI". *Id.* at 967.

⁶¹ Off. Mgt. Budget, *Federal Interaction with Commercial Standards-Setting Bodies – Proposed OMB Circular*, 41 Fed. Reg. 53723 (1976) [hereinafter OMB Circular Proposal 1976].

this circular reflected the ongoing tension between permissive and interventionist tendencies in U.S. standardization policy.⁶² The 1976 draft called for increased use of voluntary industry standards by government agencies.⁶³ The reception of this circular by the private sector was largely favorable but at least two government agencies had negative comments.⁶⁴ A 1977 version attempted to account for concerns that were raised, notably by limiting government use of voluntary industry standards to those issued by government-accredited standards bodies.⁶⁵ This version in turn was criticized by ANSI and other representatives of the private standardization system.⁶⁶ Over the following years, an Interagency Committee on Standards Policy deliberated over these contentions,⁶⁷ culminating in the release of the finalized policy as OMB Circular A-119 in January 1980.⁶⁸

Circular A-119 establishes a Federal policy favoring the use of privately developed voluntary standards in federal procurement activities:

It is the general policy of the Federal Government to ... [r]ely on voluntary standards both domestic and international with respect to Federal procurement, whenever feasible and consistent with law and regulation pursuant to law;⁶⁹

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 law,⁷⁰

And “voluntary standards bodies”, the groups that “develop, establish, or coordinate voluntary standards” are defined as

nongovernmental bodies which are broadly based, multi-member, domestic and multinational organizations including, for example, non-profit organizations, industry associations, and professional technical societies.⁷¹

In addition to adopting voluntary standards in their procurement functions, Circular A-119 encouraged federal agencies to participate in voluntary standards bodies.⁷² Standards bodies in

⁶² See, e.g., Hamilton, *Role*, *supra* note 26, at 1438-39; ACUS Report, *supra* note 44, at 13.

⁶³ OMB Circular Proposal 1976, *supra* note 61.

⁶⁴ OTA 1992 Report, *supra* note 19, at 55; Hamilton, *Role*, *supra* note 26, at 1439-41.

⁶⁵ Off. Mgt. Budget, Proposed OMB Circular on Federal Interaction with Voluntary Consensus Standards-Developing Bodies, 43 Fed. Reg. 48 (1977).

⁶⁶ OTA 1992 Report, *supra* note 19, at 56; Hamilton, *Role*, *supra* note 26, at 1441-44.

⁶⁷ *Id.* at 16

⁶⁸ Off. Mgt. Budget, Federal Participation In the Development and Use of Voluntary Standards; Final Issuance, 45 Fed. Reg. 4326 (1980) [hereinafter OMB Circular A-119 (1980)].

⁶⁹ OMB Circular A-119, *supra* note 68, at 4326 ¶ 5.a.

⁷⁰ *Id.* ¶ 4.c.

⁷¹ *Id.* ¶ 4.e.

⁷² *Id.* ¶ 6.b.

which federal agencies participated, however, were required to comply with certain minimum “due process” criteria.⁷³ 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, institutional and other users; environmental and conservation groups; and State and local procurement and code officials.⁷⁴

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

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,⁷⁵ a permissive approach toward private industry standardization prevailed in the U.S. government’s standardization policy. In 1981, the President’s Task Force on Regulatory Relief reviewed OMB Circular A-119 to determine whether it imposed unnecessary burdens on the public or private sectors.⁷⁶ Following this review, a draft revision of the Circular was published in the Federal Register on April 20, 1982.⁷⁷ After a 60-day public comment period, during which 120 comments were received, a final revision was published on October 26, 1982.⁷⁸

The 1982 revision of the Circular introduced a number of substantive changes. Most importantly, it expanded the scope of the Circular from federal procurement activity to both federal procurement and *regulatory* activity. In addition, it 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 “the imposition of the mandatory procedures included in the previous editions of the Circular is inappropriate, burdensome and costly and ... peripheral to the fundamental aims of the Circular”.⁷⁹ The U.S. Department of Justice Antitrust Division (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

⁷³ *Id.* ¶ 6.c. See also Hamilton, *Role*, *supra* note 26, at 1346 (applying the term “due process” broadly to a set of procedural protections).

⁷⁴ OMB Circular A-119 (1980), *supra* note 68, ¶ 6.c.

⁷⁵ See, generally, BREYER, *supra* note 57; Jefferson Decker, *Deregulation, Reagan-Style*, Regulatory Rev., Mar. 13, 2019.

⁷⁶ cite

⁷⁷ 47 Fed. Reg. 16,919 (1982).

⁷⁸ 47 Fed. Reg. 49,496 (1982).

⁷⁹ *Id.*

standards groups”.⁸⁰ In its 1982 version, “with the due process requirements eliminated, OMB Circular A-119 is strongly supported by the private sector”.⁸¹

In line with the revisions of OMB Circular A-119, the FTC in 1983 issued a Final Staff Report on Standards and Certification, which marks significant changes from the FTC’s 1978 report.⁸² The Final Staff Report continues to recognize 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.”⁸³ Nevertheless, the standard that it establishes for these procedural safeguards falls short of the 1978 Proposed Rule’s requirement that SDOs should offer all parties equal opportunity to participate at all stages of standards development. Rather, the FTC considers that SDOs must provide affected producers with notice, the opportunity to file a complaint to the SDO, and the right to a written response.⁸⁴

This standard does not protect a minimum representation of certain interest categories. In line with the 1978 Report, the Final Staff Report of 1983 reflects skepticism of some SDOs’ formal balance requirements.⁸⁵ Echoing some of the concerns expressed in the 1970s,⁸⁶ the FTC notes that quota schemes are seldom imposed on the working groups that actually formulate technical standards documents, the classification of individuals into particular categories is often imperfect, and there are ample other ways to skew the standardization process even when such requirements exist.⁸⁷

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

At the same time that the U.S. government adopted a significantly more lenient approach toward SDOs, 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”.⁸⁸

The previously mandatory provisions for balanced committee composition are referred to as “the historical criteria for balance”.⁸⁹ The *Procedures* state that compliance with these ‘historical criteria’ would usually satisfy the mandatory requirement to avoid dominance by any single

⁸⁰ Letter dated June 22, 1982 from Ronald G. Carr, Acting Asst. Atty. Gen., Antitrust Div., U.S. Dept. of Justice, to Donald E. Sowle, Admin. for Federal Procurement Policy, OMB (reproduced at 47 Fed. Reg. 49,496).

⁸¹ OTA 1992 Report, *supra* note 19, at 56

⁸² Fed. Trade Comm’n, Standards and Certification – Final Staff Report (1983) [hereinafter FTC 1983 Report].

⁸³ *Id.* at 262.

⁸⁴ *Id.* at 273.

⁸⁵ *Id.* at 159 (“for several reasons, classification schemes do not always achieve their intended effect”).

⁸⁶ See Hamilton, *Role*, *supra* note 26, at 1354-55 (given the impossibility or impracticability of applying mandatory balance rules to working groups, the putative balance protection at ASTM may, in fact, be illusory).

⁸⁷ FTC 1983 Report, *supra* note 82, at 159-64.

⁸⁸ Am. Natl. Standards Inst., *Procedures for the Development and Coordination of National Standards* (1983), at 4

⁸⁹ *Id.*

interest; nevertheless, such balanced composition is no longer systematically required or assessed by ANSI: “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.”⁹⁰

The new version of the *Procedures* significantly weakens the requirement to seek balanced representation of different interest categories. It does not, however, abandon this requirement entirely, nor the underlying definition of balance as a situation where different interests are sufficiently equally represented. The listed “interests” make it clear that “interests” still refer to constituencies with aligned commercial interests in a standard, such as producers, users, etc. Absence of dominance by a single interest thus differs from domination of standards processes to the benefit of a single firm or single product, and refers to the absence of a situation in which a 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 continue to distinguish between product and safety standards, where the criteria of balance are more stringent for the latter.

ANSI’s procedures relating to balance again changed in 1987, when the name of the due process requirement in question was changed back to “Balance”: “The standards development process should have a balance of interests and shall not be dominated by any single interest category.”⁹¹ In addition to explicitly stating that standards development processes should reflect a balance of interests, the 1987 revision of the *Procedures* makes it more explicit that – in the context of balance – the absence of dominance clearly refers to 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 was present in the 1970s. Balanced committee composition would “usually satisfy” the balance requirement; however, balance in committee composition should only be tested if a directly and materially affected party claimed that a single interest category dominated the standards development process. The provisions with respect to balance of interests were not significantly modified in the 1993, 1997, and 1998 revisions of ANSI’s *Procedures*.⁹²

G. THE RISE OF CONSORTIA AND IT STANDARDIZATION (1980-90s)

ANSI’s more flexible approach towards assessing balance of interests in the development of American National Standards may reflect the significant transformations in the standardization ecosystem that were under way in the 1980s. In the context of the ever-increasing role of information technology, 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 for the complex

⁹⁰ *Id.*

⁹¹ Am. Natl. Standards Inst., *Procedures for the Development and Coordination of National Standards* (1987).

⁹² Am. Natl. Standards Inst., *Procedures for the Development and Coordination of National Standards* (1993), Am. Natl. Standards Inst., *Procedures for the Development and Coordination of National Standards* (1997), Am. Natl. Standards Inst., *Procedures for the Development and Coordination of National Standards* (1998).

interoperability needs of new information and communication technologies.⁹³ As two veteran standardization practitioners observe, “SDOs are, by their nature, inclusive groups. As such, they tend to be large, so their effectiveness diminishes. As the preferences of the group members becomes more diverse, it becomes more difficult to reach consensus.”⁹⁴ Consortia may offer a simpler, yet unbalanced, alternative to more formal SDOs: “These must be small groups with a relatively uniform preference structure in order to be effective. Almost by definition, these must be exclusive groups”.⁹⁵

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 program to develop a resilient distributed computer network during the 1960s and 1970s. As such, the original developers of the protocols underlying that network were primarily from academia and government. The result of that program, the ARPANET, eventually evolved into the Internet that we know today, and IETF emerged as the principal global forum for the development of Internet standards.⁹⁶

IETF embodies a model in which technical work is open to meaningful and effective participation by all interested individuals. This included, at least in the IETF’s early days, a significant proportion of academic and government representatives. Competing attempts at developing standards for network connectivity were largely driven by corporate interests, e.g. the telecommunications network operators prominently represented in the Consultative Committee for International Telegraph and Telephone (CCITT).⁹⁷ CCITT worked within ISO to create the Open Systems Interconnection model (OSI). Backed by numerous governments (including the U.S., which at one point referenced its own OSI implementation, GOSIP, for public procurement),⁹⁸ OSI was a plausible contender to become the world standard for computer connectivity. OSI however was undermined by conflicts among different stakeholder constituencies (such as the “legacy” providers of proprietary network solutions, most notably IBM, and telecommunications network operators), which created significant challenges for the traditional, open and consensus-oriented decision making processes. As historian Andrew Russell notes.

Whereas OSI found the time-honored principles of democratic inclusivity to be both necessary and fatal, the Internet flourished by developing their network architecture within a well-funded and homogeneous environment that was, in the late 1970s and early 1980s, insulated from commercial and political pressures.⁹⁹

⁹³ 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 (“in 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”).

⁹⁴ Weiss & Cargill, *supra* note 93, at 563.

⁹⁵ *Id.* As they grew in significance, some consortia gravitated closer to the established SDOs, and partly embraced their procedural principles. For instance, the Organization for the Advancement of Structured Information Standards (OASIS), a software-based consortium, sought and obtained ANSI accreditation.

⁹⁶ See, generally, YATES & MURPHY, *supra* note 1, at 242-54.

⁹⁷ RUSSELL, *supra* note 19, at 179 (“The CCITT’s protocols were deliberately designed to put control of the network in the hands of the PTTs”).

⁹⁸ Andrew Russell, *'Rough consensus and running code' and the Internet-OSI standards war*. IEEE ANNALS OF THE HISTORY OF COMPUTING 28.3 (2006), at 53.

⁹⁹ RUSSELL, *supra* note 19, at 258.

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 below).¹⁰⁰ Nevertheless, by that time, the Internet had already emerged victorious over its rival OSI, with IETF as its primary venue for standards development.

These consortia models thus competed with traditional SDOs, which had to become more flexible in order 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 explicit reference to these due process principles was eliminated from OMB Circular in 1982, the early IETF and the numerous consortia emerging in the 1980s seemingly fell outside the Circular's definition of "voluntary standards body". In practice, while federal regulations incorporate standards issued by a large number of non-governmental organizations, including some consortia, these standards still predominantly originate from ANSI-accredited ASDs, formal international SDOs, and other well-established organizations.

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."¹⁰¹ Yet ASTM itself was exonerated from the charges and the judge later spoke glowingly of "the balance of interests represented on ASTM committees and ... the detailed and scrupulously observed procedure which governs their operation".¹⁰²

But by the 1980s, the procedures and processes of SDOs themselves began to come under judicial scrutiny when coupled with allegedly anticompetitive behavior by SDO participants. Two of the most important cases of this type were *American Society of Mechanical Engineers (ASME) v. Hydrolevel*,¹⁰³ and *Allied Tube & Conduit Corp. v. Indian Head, Inc.*¹⁰⁴ Each case involved

¹⁰⁰ *Id.* at 256.

¹⁰¹ Application of American Soc. for Testing & Materials, 231 F. Supp. 686, 687 (E.D. Pa. 1964).

¹⁰² Spivak & Brenner, *supra* note 4, at 38 (quoting unreported judicial findings of fact).

¹⁰³ 456 U.S. 556 (1982).

¹⁰⁴ 486 U.S. 492 (1988).

antitrust claims that challenged the procedures used within SDOs and helped to shape the modern understanding of “due process” requirements within the standardization context.¹⁰⁵

ASME involved a standard for boilers and pressure vessels promulgated by a committee of 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, which prohibits conspiracies in restraint of trade.

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, holding not only that ASME was liable for the conduct of the M&M employees acting in their capacities as ASME officers, but affirming an award of treble damages against the SDO. The *ASME* 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.¹⁰⁶

The implications of this principle for SDO balance requirements were subsequently clarified in the Supreme Court’s *Allied Tube* decision. 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. 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.¹⁰⁷ In addition to fire codes, NFPA is also responsible for the National Electrical Code, which establishes requirements for the design and installation of electrical wiring systems, many of which are adopted into local building codes and regulations.¹⁰⁸ The facts of the controversy that ensued at NFPA, which are reproduced in detail below for illustrative purposes, are as follows:¹⁰⁹

¹⁰⁵ Legal regimes, and antitrust law in particular, have strongly shaped SDO practices and procedures. See JRC Report, *supra* note 2, at x.

¹⁰⁶ *ASME*, 456 U.S. at 573 (“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 abuse of its reputation – is most faithful to the congressional intent that the private right of action deter antitrust violations.”).

¹⁰⁷ Hamilton, *Role*, *supra* note 26, at 1340 (“Manufacturers constitute about six and one-half percent and insurance companies eleven percent of NFPA’s membership”).

¹⁰⁸ *Allied Tube*, 486 U.S. at 495-96.

¹⁰⁹ The facts underlying the famous *Allied Tube* case are but one of several controversies involving NFPA and its procedures during the 1980s. See FTC 1983 Report, *supra* note 82, at 162-63 (citing additional complaints that NFPA’s “procedural rules governing standards development were exploited to thwart participation”).

Among the electrical products covered by the Code is electrical conduit, the hollow tubing used as a raceway to carry electrical wires through the walls and floors of buildings. Throughout the relevant period, the Code permitted using electrical conduit made of steel, and almost all conduit sold was in fact steel conduit. Starting in 1980, [Indian Head, Inc. (IHI)] began to offer plastic conduit made of polyvinyl chloride...

[IHI] initiated a proposal to include polyvinyl chloride conduit as an approved type of electrical conduit in the 1981 edition of the Code. Following approval by one of the Association's professional panels, this proposal was scheduled for consideration at the 1980 annual meeting, where it could be adopted or rejected by a simple majority of the members present. Alarmed that, if approved, [IHI's] product might pose a competitive threat to steel conduit, [Allied Tube], the Nation's largest producer of steel conduit, met to plan strategy with, among others, members of the steel industry, other steel conduit manufacturers, and its independent sales agents. They collectively agreed to exclude [IHI's] product from the 1981 Code by packing the upcoming annual meeting with new Association members whose only function would be to vote against the polyvinyl chloride proposal.

Combined, the steel interests recruited 230 persons to join the Association and to attend the annual meeting to vote against the proposal. [Allied Tube] alone recruited 155 persons -- including employees, executives, sales agents, the agents' employees, employees from two divisions that did not sell electrical products, and the wife of a national sales director. [Allied Tube] and the other steel interests also paid over \$100,000 for the membership, registration, and attendance expenses of these voters. At the annual meeting, the steel group voters were instructed where to sit and how and when to vote by group leaders who used walkie-talkies and hand signals to facilitate communication. Few of the steel group voters had any of the technical documentation necessary to follow the meeting. None of them spoke at the meeting to give their reasons for opposing the proposal to approve polyvinyl chloride conduit. Nonetheless, with their solid vote in opposition, the proposal was rejected and returned to committee by a vote of 394 to 390.¹¹⁰

Shortly after this vote, IHI 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.¹¹¹ But the verdict was nullified by the district court *n.o.v.* under the *Noerr-Pennington* doctrine,¹¹² and it was this issue that was eventually appealed to the Supreme Court in 1988 (IHI won on this point as well – the jury verdict against Allied Tube was reinstated).¹¹³

¹¹⁰ *Allied Tube*, 486 U.S. at 496-97.

¹¹¹ *Id.* at 498.

¹¹² *Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U. S. 127 (1961); *United Mine Workers v. Pennington*, 381 U. S. 657 (1965). The so-called *Noerr-Pennington* doctrine provides that “where 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.” *Noerr*, 365 U.S. at 136.

¹¹³ *Allied Tube*, 486 U.S. at 509-10 (“we hold that, at least where, as here, an economically interested party exercises decisionmaking authority in formulating a product standard for a private association that comprises market

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 recognizes 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."¹¹⁴ It goes on to observe that "[w]hat [SDO members] 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."¹¹⁵ 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 be enough to result in a violation of the Sherman Act. Accordingly, the Court conceptualized its vision of a properly-functioning standardization system as one that is "nonpartisan".¹¹⁶

I. 1990s – 2000s: THE NTTAA, THE 1998 REVISIONS TO OMB CIRCULAR A-119, AND ANSI'S ESSENTIAL REQUIREMENTS

In 1992, four years after the *Allied Tube* decision, OMB issued a new request for comments regarding Circular A-119. In response, several commenters suggested that the definitions in Circular A-119 were "ambiguous" and recommended changing them to reflect either the Supreme Court's approach in *Allied Tube* or the definitions in the GATT Standards Code. OMB declined to change the definitions in the Circular, noting that they "are not being misinterpreted and have served their purpose well".¹¹⁷ A final revised version of the Circular was issued on October 26, 1993. It did not require that SDOs adopt specific balancing of interests or other due process principles.¹¹⁸

In 1996, President Clinton signed the National Technology Transfer and Advancement Act (NTTAA).¹¹⁹ 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."¹²⁰ Because the term "voluntary consensus standards body" was not expressly defined in the NTTAA, it was generally understood to refer to the definition contained in the Circular.

The enactment of the NTTAA thus led to another review of the Circular, and on December 27, 1996, OMB released a new draft version for public comment.¹²¹ Public hearings were held on

participants, that party enjoys no *Noerr* immunity from any antitrust liability flowing from the effect the standard has of its own force in the marketplace.")

¹¹⁴ *Id.* at 509.

¹¹⁵ *Id.* at 511.

¹¹⁶ *Id.* at 506-07.

¹¹⁷ 58 Fed. Reg. 57,643 (1993).

¹¹⁸ *Id.*

¹¹⁹ Pub. Law 104-113 (1996).

¹²⁰ *Id.* at § 12(d)(1).

¹²¹ 61 Fed. Reg. 68,312 (1996)

February 10, 1997 and comments were received from over 50 sources. OMB published the final revisions to the Circular on February 19, 1998.¹²²

The 1998 revisions of the Circular constitute a complete overhaul of the structure and language of the Circular, converting it to a “plain English” question-and-answer format. It substantially altered the definition of “voluntary consensus standards body” from prior versions of the Circular. The new definition reads as follows:

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

- (i) Openness.
- (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 parties ...¹²³

This definition differs significantly from the definition of “voluntary standards body” contained in each prior version of Circular A-119. Whereas earlier definitions simply referred to organizations that “develop, establish, or coordinate voluntary standards”, the 1998 definition imposes a new set of criteria defining such bodies, including openness, balance of interest, and due process. It is possible that the Supreme Court’s decision in *Allied Tube* influenced OMB in developing this new set of criteria for SDOs, particularly a formal requirement of “balance” (which would conceivably prevent 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.¹²⁴

J. THE STANDARDS DEVELOPMENT ORGANIZATION ADVANCEMENT ACT OF 2004

In the late 1990s and early 2000s, the standardization world witnessed a wave of litigation involving allegations of deception involving patents by companies including, most notably, Rambus, Inc.¹²⁵ Among other things, Rambus was the subject of an investigation and prosecution by the FTC, which accused it 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.¹²⁶ One of the outgrowths of this heightened awareness was the enactment in 2004 of the Standards Development Organization Advancement Act

¹²² 63 Fed. Reg. 8,546 (1998).

¹²³ 63 Fed. Reg. 8,554, § 4.a(1).

¹²⁴ Several commenters in 1997 requested that OMB clarify these definitions, but OMB declined to do so. 63 Fed. Reg. 8,548, Item 28.

¹²⁵ 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).

¹²⁶ See JRC Report, *supra* note 2, at 140.

(SDOAA),¹²⁷ which was intended to offer SDOs protection against certain types of antitrust liability that could arise from the actions of their members.

Rather than craft a new legislative framework for this protection, Congress simply added SDOs to the types of entities already protected under the existing National Cooperative Research and Production Act of 1993 (NCRPA),¹²⁸ which itself was an outgrowth of the Reagan-era National Cooperative Research Act of 1984 (NCRA).¹²⁹ When enacted the NCRA was intended to encourage innovation and promote trade by facilitating the participation of U.S. industries in R&D joint ventures.¹³⁰ 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 laws¹³¹ 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.¹³² In 1993, given pressures on U.S. manufacturing industries, the protections of the NCRA were extended to joint production ventures.¹³³

Under the original NCRA, “joint research and development ventures” are defined as “two or more persons” engaged in one of a variety of enumerated technical cooperation activities, and which did not engage in any of a list of prohibited anticompetitive activities.¹³⁴ This definitional structure was preserved in the NCRPA.¹³⁵ Under the SDOAA, “standards development organizations” were added to the types of entities protected by the Act. It defines “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.”¹³⁶ Like the 1998 circular, the SDO balance requirement under the SDOAA is not defined.

However, the preamble to the SDOAA elaborates on the due process requirements of OMB Circular A-119, noting in particular that the “balance” requirement provides for “balancing interests so that standards development activities are not dominated by any single group of interested persons.”¹³⁷ This “non-domination” balance requirement, which must be read into the text of the SDOAA, is distinctly not a quota requirement. That is, the SDOAA does not mandate

¹²⁷ Standards Development Organization Advancement Act of 2004, Public Law 108–237 (2004), codified at 15 U.S.C. §§ 4301-4306.

¹²⁸ National Cooperative Production Amendments of 1993, Public Law 103–42 (Jun. 10, 1993), codified at 15 U.S.C. §§ 4301 et seq.

¹²⁹ Public Law 98-462 (Oct. 11, 1984), codified at 15 U.S.C. §§ 4301 et seq.

¹³⁰ *Id.*

¹³¹ *Id.* § 4.

¹³² *Id.* § 3.

¹³³ NCRPA, *supra* note 128.

¹³⁴ NCRA, *supra* note 129, § 2(6).

¹³⁵ NCRPA, *supra* note 128.

¹³⁶ *Id.* § 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.

¹³⁷ *Id.* § 102(5)(C).

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 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 their economic interest in restraining competition.”¹³⁸

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 *ANSI Essential Requirements*. At a high level, the *ANSI 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 appeals.¹³⁹ In terms of balance, however, ANSI 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 “The 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.¹⁴⁰

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.

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 suggested: producer, user¹⁴¹ and general interest. However, the door is left open “where appropriate” for the consideration of additional interest categories including consumer, directly affected public, distributor and retailer, industrial/commercial, insurance, labor, manufacturer, professional society, regulatory agency, testing laboratory, and trade association.¹⁴²

¹³⁸ *Allied Tube*, 486 U.S. at 511.

¹³⁹ Am. Natl. Standards Inst., *ANSI Essential Requirements: Due Process Requirements for American National Standards 4* (2019) [hereinafter *ANSI Essential Requirements* (2019)].

¹⁴⁰ *Id.*

¹⁴¹ Four different sub-categories of “user” are defined based on the type of standard being produced: consumer, industrial, government and labor. *Id.*

¹⁴² ANSI’s non-exhaustive list of potential interest categories does not include firms seeking to monetize patents or foreign manufacturers.

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 a developer’s accredited procedures is a requirement.”¹⁴³ Such outreach must be targeted to any “specific interest categories is not sufficiently populated 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.”¹⁴⁴

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.¹⁴⁵

ANSI clearly considers balance and lack of dominance to be distinct considerations.¹⁴⁶ 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.¹⁴⁷

Accordingly, ANSI requires both affirmative outreach activity to ensure balance, and a final group composition that avoids dominance by any single interest category.

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

In 2012, OMB again invited public commentary on Circular A-119.¹⁴⁸ After releasing a draft revision in 2014, OMB published the final revised version of Circular A-119 in January 2016.¹⁴⁹ It includes the following provision:

¹⁴³ ANSI, Guidance on “Balance” and Outreach within the American National Standards (ANS) Process (ExSC 042_2016) at ¶ 3.0 [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”.

¹⁴⁴ *Id.* ¶ 4.

¹⁴⁵ ANSI *Essential Requirements* (2019), *supra* note 139, at § 1.2.

¹⁴⁶ ANSI Balance Guidance, *supra* note 143, ¶ 6.

¹⁴⁷ *Id.*

¹⁴⁸ 77 Fed. Reg. 19,357 (2012).

¹⁴⁹ 81 Fed. Reg. 4,673 (2016), referencing Office of Management and Budget, OMB Circular A-119: Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, Jan. 22, 2016 [OMB Circular A-119 (2016)].

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.¹⁵⁰

The 2016 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.”¹⁵¹

In addition, the 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 intellectual property rights (IPR) 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.¹⁵²

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

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.¹⁵³ 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.”¹⁵⁴

¹⁵⁰ OMB Circular A-119 (2016), *supra* note 149, at § 2(e)(ii).

¹⁵¹ OMB Circular A-119 (2016), Supplementary Material, Discussion and Responses to Significant Comments, at 7.

¹⁵² OMB Circular A-119 (2016), *supra* note 149, at § 2(d).

¹⁵³ See CARL F. CARGILL, INFORMATION TECHNOLOGY STANDARDIZATION: THEORY, PROCESS, AND ORGANIZATIONS 99, 109 (1989) (“working groups ... are composed of volunteers representing all facets of the affected industry – the providers, the users, government, academia, interested or involved groups, and individual experts”).

¹⁵⁴ CARGILL, *supra* note 153, at 108.

Despite the potential benefit of qualifying as a “voluntary consensus standards body” under OMB Circular A-119 and the SDOAA, and as a developer 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,¹⁵⁵ which in 1992 moved to a governance model emphasizing its openness to all interested parties,¹⁵⁶ but which does not impose any formal requirements of balance on its deliberations.¹⁵⁷ The IETF explained in its 2012 comments to OMB its belief that a balance requirement “is largely duplicative of the “openness” and “due process” prongs of the definition [of voluntary consensus standards body]”.¹⁵⁸ It further noted that IETF is widely acknowledged by both federal agencies and academic commentators to be an exceptionally open and democratic body.¹⁵⁹ As such, IETF contends that it achieves a high degree of balance through the mechanism of openness – what may be termed “practical balance”. This approach, while not achieving the degree of numerical balancing that could be achieved under a quota or more formal balancing system, has resulted in a long-standing and effective standardization process. 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.¹⁶⁰

IETF has reinforced its interpretation of “balance” in the stated principles of the OpenStand initiative, which also includes the IEEE Standards Association and W3C. There, “Balance” is included as one of the five principles shaping the “modern paradigm for standards” and is defined for this purpose as having standards activities that “are not exclusively dominated by any particular person, company or interest group.”¹⁶¹ 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.

Moreover, even without formal balance requirements, some SDOs have taken positive steps to encourage participation by diverse stakeholder groups including consumers and civil society.¹⁶²

¹⁵⁵ IETF has, by choice, never sought accreditation by ANSI.

¹⁵⁶ See Letter dated Apr. 29, 2012 from Jorge L. Contreras, Russ Housley and Bernard Aboba to Office of Information and Regulatory Affairs, Office of Management and Budget, at 2 [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

¹⁵⁷ See YATES & MURPHY, *supra* note 1, at 253-54. There are some exceptions to this general principle at IETF. One exception regards the composition of Nominating Committees (NomComs), whose ten members are randomly selected from a pool of qualifying volunteers. If the random selection results in more than two appointees with the same affiliation being selected, the third such candidate is replaced with another candidate randomly selected from the pool.

¹⁵⁸ IETF Letter, *supra* note 156, at 4.

¹⁵⁹ *Id.*

¹⁶⁰ 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) and 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/policy advocates in IETF standard setting).

¹⁶¹ OpenStand, Principles, <https://open-stand.org/about-us/principles/> (visited Sep. 17, 2020).

¹⁶² See JRC Report, *supra* note 2, at 120.

IETF, through its parent organization the Internet Society, regularly funds the participation in IETF standardization activities of individuals from developing countries.¹⁶³

N. BALANCE IN INTELLECTUAL PROPERTY POLICIES

In 2015, IEEE amended its patent policy¹⁶⁴ in a manner that was argued by some to be unfavorable to IEEE participants that primarily sought to earn revenue from the licensing of patents covering IEEE standards (“patent-centric” firms) and overly favorable to participants that primarily sought to earn revenue from sales of standardized products (“product-centric” firms).¹⁶⁵ As such, both the IEEE policy and the decision making process that led to its adoption, were criticized as being unbalanced. The ensuing public debate over the IEEE policy involved multiple SDO participants, SDOs and the U.S. DOJ.

On February 2, 2015, the DOJ issued a Business Review Letter, which recognizes that an unbalanced process for setting an IPR Policy may potentially violate antitrust laws.¹⁶⁶ Nevertheless, after reviewing the process through which the update was adopted, the letter concludes that “Given the numerous opportunities for comment, discussion, and voting at different levels within IEEE, the Department cannot conclude that the process raises antitrust concerns”.¹⁶⁷ 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; but did not further discuss patent-centric firms’ concerns with the composition of these governance bodies.

Under the Trump Administration, DOJ officials gave numerous speeches emphasizing a more stringent interpretation of balance requirements for SDOs under antitrust laws, in particular with respect to the balance between the interests of patent- and product-centric firms.¹⁶⁸ 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

¹⁶³ 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* (Ashish Bharadwaj, Vishwas H. Deviah & Indranath Gupta, eds., Springer: 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.

¹⁶⁴ For a discussion of these amendments, see JRC Report, *supra* note 2, at 151-64.

¹⁶⁵ E.g. J. Gregory Sidak, *Testing for Bias to Suppress Royalties for Standard-Essential Patents*, 1 *CRITERION J. ON INNOVATION* 301 (2016); Nicolo Zingales & Olia Kanevskaia, *The IEEE-SA patent policy update under the lens of EU competition law*, 12 *EUR. COMPETITION J.*195 (2016). For the distinction between patent- and product-centric firms, 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).

¹⁶⁶ “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).

¹⁶⁷ *Id.*

¹⁶⁸ See e.g. speeches by Assistant Attorney General Makan Delrahim on November 10, 2017 <https://www.justice.gov/opa/speech/file/1010746/download> and March 16, 2018 <https://www.justice.gov/opa/speech/file/1044316/download>.

to implementers, or vice versa.”¹⁶⁹ 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.”¹⁷⁰ The DOJ again reminded ANSI of the importance of balance in a 2020 review of the 2015 U.S. Standards Strategy published by ANSI, writing that

principles of openness and balance of interests should extend to intellectual property policy development. If an SSO’s intellectual property rights policy is too restrictive for one side or the other, it also risks deterring participation in procompetitive standard setting. The Department has urged ANSI to have balanced representation in its decisional bodies that are charged with implementing and revising ANSI’s Patent Policy, so that diverse interests are represented, and so that their decisions do not shift bargaining leverage in favor of one set of economic interests, including the interests of either implementers or patent holders.¹⁷¹

In 2019, the DOJ expressed “significant concerns” that the GSM Association and its 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.”¹⁷²

In 2020, the DOJ updated its 2015 business review letter to IEEE,¹⁷³ citing both the IPR-related language of the 2016 version of OMB Circular A-119 as well as concerns raised in 2015 “that the IEEE’s process for adopting the Policy was not balanced.”¹⁷⁴ The DOJ emphasized that “[b]alance is ... 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.”¹⁷⁵ It concluded by encouraging IEEE to consider whether further changes to its IPR policy might be warranted in order to address “the need for an open, balanced, and transparent process for standards development.”¹⁷⁶

The repeated emphasis by the DOJ on the need to take into account the interests of both patent- and product-centric firms when making SDO policy decisions on IPR indicates that IPR-related concerns were the primary focus of the Trump Administration’s interest in SDOs balance requirements. The implications of this shift are discussed in greater detail in Part V, below.

¹⁶⁹ Letter from Andrew Finch, Principal Deputy Assistant Att’y General, Antitrust Div. to Patricia Griffin, Vice President and General Counsel, Am. Nat’l Standards Inst. at 1 (Mar. 7, 2018) [DOJ ANSI Letter].

¹⁷⁰ Letter from Makan Delrahim, Assistant Attorney General to Sophia A. Muirhead at 10 n.53 (Sep. 10, 2020) [hereinafter DOJ IEEE Update Letter] (referencing DOJ letters to ANSI).

¹⁷¹ U.S. Dept. Justice Antitrust Division, Comments on the U.S. Standards Strategy at 3 (September 8, 2020).

¹⁷² Letter from Makan Delrahim, Assistant Attorney General to Timothy Cornell, Esq. re. GSMA Business Review Letter Request at 4 (Nov. 27, 2019) [DOJ GSMA Letter].

¹⁷³ 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).

¹⁷⁴ DOJ IEEE Update Letter, *supra* note 170, at 10-11.

¹⁷⁵ *Id.* at 11.

¹⁷⁶ *Id.* at 9-10.

IV. BALANCE REQUIREMENTS IN EUROPEAN STANDARDIZATION POLICY AND PRACTICE

A. HISTORICAL ORIGINS

As in the U.S., standardization in Europe has its origins in the standardization “movement” of the end of the 19th and early 20th centuries. Most early European standardization bodies arose from engineering associations. Electrical engineers, in particular, formed national associations in the leading European countries at the end of the 19th century.¹⁷⁷ These associations ventured into standardization in the early 20th century. The British Standards Institute (BSI) was founded in 1901, making it the oldest National Standards Body (NSB) in the world.¹⁷⁸ In Germany, the Normenausschuß der deutschen Industrie (NADI, "Standardization Committee of German Industry") was created in 1917 in the context of World War I and the mobilization of German industry in support of the war effort.¹⁷⁹ This is the precursor organization to today's Deutsches Institut für Normung, or 'DIN', the German NSB. Other European NSBs or their precursor organizations were created early in the 20th Century, such as the French Association française de normalisation, or 'AFNOR', in 1926.¹⁸⁰

The activities of the European NSBs are also firmly rooted in the development of international standards. In fact, AFNOR was specifically created in 1926 in the context of the creation of the International Federation of the National Standardizing Associations (ISA) in order to allow for French representation in this international standardization organization. The founder of BSI, Charles Le Maistre, “has some claim to be known as the father of international standardization”,¹⁸¹ and was prominently involved in the formation and leadership of both ISA and the IEC. Given the prominent role of international standards for the European NSBs, it is not surprising that the European NSBs were built on similar procedural principles as the international organizations and as their counterparts in the U.S.

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.¹⁸² There were however limited formal requirements imposed on private standards development. BSI was first offered 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

¹⁷⁷ YATES & MURPHY, *supra* note 1, at 27-28.

¹⁷⁸ *Id.* at 52.

¹⁷⁹ GÜNTHER LUXBACHER. *DIN VON 1917 BIS 2019 – NORMUNG ZWISCHEN KONSENS UND KONKURRENZ IM INTERESSE DER TECHNISCH-WIRTSCHAFTLICHEN ENTWICKLUNG* 48-61 (2020).

¹⁸⁰ YATES & MURPHY, *supra* note 1, at 86.

¹⁸¹ JACK LATIMER, *FRIENDSHIP AMONG EQUALS: RECOLLECTIONS FROM ISO'S FIRST FIFTY YEARS* 16 (1997).

¹⁸² YATES & MURPHY, *supra* note 1, at 79, indicate that the main mover behind the creation of DIN, Waldemar Hellmich, believed very strongly in the need to involve all stakeholder (*Interessengruppen*) in standardization proceedings, in order to ensure both the quality and the legitimacy of the resulting standard.

governmental standardization policy at the time. Nevertheless, NSBs such as Germany's 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' formulated 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"¹⁸³.

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.¹⁸⁴ At the same time, technology standards became increasingly important not only for industry, but also for regulation. In this context, in many countries in Europe governments perceived the need for a more formal standardization policy. This standardization policy generally entailed a formal government 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 under-represented societal interests (most notably consumers, but also labor, government, science, and – later – environmental groups).

There were two options for the form of this standardization policy. Countries such as Austria, Belgium, and France chose legislation, whereas Denmark, Germany, Sweden and the UK instead opted for an agreement between the government and the NSB.

The *Staatsvertrag*, the 1975 treaty setting out the agreement between DIN and the German government exemplifies a flexible approach to standardization policy.¹⁸⁵ The explanations accompanying the treaty recognize that standardization is a form of industry self-regulation (thus implicitly recognizing not only the absence of rigid government oversight of standardization practices, but also the dominant role of industry in standards development).¹⁸⁶ The treaty offers financial support for standards development and formal recognition of DIN as German NSB, but excludes any delegation of governmental authority to DIN. In exchange for this recognition, DIN commits to pursue the public interest in standards development. The explanations appended to the treaty state that the pursuit of the public interest encompasses the development of standards

¹⁸³ "Normen dürfen nicht am grünen Tisch entstehen, sondern müssen aus gemeinschaftlicher Arbeit und Übereinkunft aller Beteiligten der Erzeuger, Händler und Verbraucher der Behörden und der Wissenschaft hervorgehen." LUXBACHER. *supra* note 179, at 88. Luxbacher highlights that at that time, similar to the English "consumer", the German word "Verbraucher" did not designate individual end users, but industrial and commercial users of industrial goods, such as the railways. *Id.* at 84.

¹⁸⁴ See e.g. re. Germany LUXBACHER. *supra* note 179, at 353-55.

¹⁸⁵ 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.

¹⁸⁶ Erläuterungen zum Vertrag zwischen der Bundesrepublik Deutschland und dem DIN Deutsches Institut für Normung e. V., 1975.

relevant to environmental protection, health and safety, and consumer protection.¹⁸⁷ In terms of representation, DIN is held to pursue the public interest by involving the relevant government authorities in its standardization processes.

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 (*Grundsätze der Normungsarbeit*), which describes high-level principles of standards development, (version of 1974), and requires DIN to respect the stipulations of the treaty when revising this document. This version of DIN 820-1 was adopted after several years of negotiations between DIN and the government, and led to a significant formalization in DIN's requirements for standardization processes.¹⁸⁸

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 (*in einem angemessenen Verhältnis zueinander*).¹⁸⁹ The document 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 (*Satzung*) states that the composition of DIN's presiding board (*Präsidium*) 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.

In spite of 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.¹⁹⁰ In a parliamentary inquiry of 2019, three *Bundestag* representatives admonished a stark over-representation of industry in a DIN standardization

¹⁸⁷ *Id.*

¹⁸⁸ 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 179, 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 31-42 (1979) (cited in Helmut Voelzkow, *Private Regierungen in der Techniksteuerung: eine sozialwissenschaftliche Analyse der technischen Normung* (1996)).

¹⁸⁹ The previous version from 1950 makes no reference to a balance of interests or equivalent or related procedural principles.

¹⁹⁰ VOELZKOW, *supra* note 188, at 230.

committee in the field of construction.¹⁹¹ In its response, the Federal government stated that by its treaty with the government, DIN is held to the principle of balanced representation of different interests required by DIN 820-1. Nevertheless, it is DIN's prerogative to select the members of standardization committees, and committee composition is only subject to DIN's internal appeals processes, not government oversight. As criticized by the inquiring representatives, the effect of this remedy is weakened by the fact that the public does not have access to the names of individual committee members.

Balanced representation of different interests in standardization committees has, however, been recognized by German courts as critical to the public acceptability 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 legitimately be done without the intervention of governmental authority.¹⁹² In 1984, the Federal Administrative Court held that a standard for children's beds in hospitals could not be expected to be in conformity with the generally recognized state of the art because the relevant Technical Committee had failed to hear the technical experts from hospitals.¹⁹³ Imbalance in the composition of a technical committee could thus result in a standard losing legitimacy and authority as representation of the technical state of the art.

UK standardization policy has taken a trajectory similar to the German one. BSI is recognized as the NSB of the UK through a Memorandum of Understanding (MoU) between BSI and the government. Similar to the German *Staatsvertrag*, the BIS 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*, Section 8.3 of the MoU explicitly provides for 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

¹⁹¹ Deutscher Bundestag Drucksache 19/7292 19. Wahlperiode 22.01.2019; Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Alexander Müller, Frank Sitta, Grigorios Aggelidis, weiterer Abgeordneter und der Fraktion der FDP

¹⁹² "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. On the one hand, one cannot deny that DIN standards are drafted with expertise and a sense of public responsibility. On the other hand, one must not overlook the fact that DIN standards are agreements between interested parties that have the aim to influence the market mechanism. Therefore, the Technical Committees of DIN do not meet the requirements which one must set as regards neutrality and objectivity of expert witnesses. Special caution with technical standards is needed, where their contents cannot be classified as extra-legal technical matters ("außerrechtliche Fachfragen"), but, rather, entail the balancing of contradicting interests, which would need a democratically legitimised political decision in the form of a formal law or regulation." Bundesverwaltungsgericht, 22 May 1987, BVerwGE 77, 285-295 (291). Cited from and translation by HARM SCHEPEL & JOSEF FALKE, LEGAL ASPECTS OF STANDARDISATION IN THE MEMBER STATES OF THE EC AND EFTA. VOL. 1 (2000).

¹⁹³ Bundesverwaltungsgericht, 31 January 1984, Betriebs-Berater 1984, 563 (cited in SCHEPEL & FALKE, *supra* note 192, at 133.

positions 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. [...]

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 historical interest categories of standards development underpinning the traditional notion of balance of interests).

The MoU references BSI’s “standard for standards” document BS-0 for more specific standardization principles. The version history of this document dates back to March 1974. It thus appears that BSI has formalized the principles on which its standardization processes are based at a very similar time as DIN and ANSI. BS-0 (cited in its latest version of 2016) lists balance of interests among the defining characteristic of British Standards: “development by balanced and broadly representative standing committees that retain responsibility for them indefinitely, and that reach agreement by consensus”. The most explicit reference to balance is made in Section 7.1, describing the principles of 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.”

In addition to being required by the MoU, balanced representation of interests on BSI committees has been seen as critical for the acceptability of BSI standards, including by courts. An earlier version of BS-0 states:

The quality of standards and their acceptance, particularly by the courts, depends largely upon the widest and most authoritative representation available. Any imbalance in the constitution of committees could result in the production of an inadequate standard which, if discredited by a court decision, might jeopardise the status of standards generally.¹⁹⁴

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.”¹⁹⁵ This policy thus appears to provide for a balance of interests requirement along the traditional definition of interest groups in standards development.

¹⁹⁴ SCHEPEL & FALKE, *supra* note 192, at 107.

¹⁹⁵ *Id.* at x.

In France, however, the ministerial order of 16 June 2009 on standardization policy casts a wider net: it provides that AFNOR will involve all stakeholders in its activities, including specifically consumer associations, trade unions and SME representatives, as well as academics.¹⁹⁶

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. The cooperation between the European Commission and the ESOS CEN and CENELEC was handled through “gentlemen’s agreements” until 1979, when CEN and CENELEC approached the European Commission for formal recognition by the European Economic Communities (EEC) and the European Free Trade Association (EFTA).

The ensuing negotiations took place in the context of a significant transfer of standardization activities from the national to the European level. In its ruling in *Cassis de Dijon* and in subsequent case-law, the the Court of Justice of the European Union held that, in the absence of EU-level harmonization, a Member State cannot prevent the importation and marketing of a product that has been lawfully produced and marketed in another Member State, unless that first Member State can invoke a higher public-interest objective.¹⁹⁷ In standardization terms, the CJEU held that free movement of goods under EU law implies mutual recognition of national standards, where they pursue equivalent objectives. Accordingly, the *Cassis de Dijon* line of case-law gave a strong impetus to pursue standardization at the EU level, in order to build trust amongst Member States and remove impediments to trade.

The current EU standardization policy was born in the early 1980s. As with many EU economic policies, it must accordingly be seen through the prism of the internal market. Standardization is a means to achieve the internal market. Furthermore it is also a means to ensure the success of EU industry, both internally (by enabling firms to reach a higher scale within the EU) and externally (by riding on EU standards to improve their competitive position abroad).

Efforts to establish harmonization and mutual recognition of technical standards resulted in a Council Directive in March 1983,¹⁹⁸ and the ‘New Approach’ to Standardization in 1985,¹⁹⁹ both of which became building blocks in the large-scale integration project of the Single European Act in 1986. Pursuant to the New Approach, instead of pursuing the harmonization of standards across the EU via direct legislation, the EU would issue general legislation setting out the essential requirements that must be complied with and mandate the detailed standardization work to

¹⁹⁶ Ministerial Order (Décret) 2009-697 of 16 June 2009 on standardization, JORF no 138:6 of 17 June 2009, art. 8 and 14.

¹⁹⁷ CJEU, Judgment of 20 February 1979, Case 120/78 Rewe-Zentral AG v. Bundesmonopolverwaltung für Branntwein (‘Cassis de Dijon’) [1979] ECR 649.

¹⁹⁸ Directive 83/189 laying down a procedure for the provision of information in the field of technical standards and regulations [1983] OJ L 109/8.

¹⁹⁹ Council Resolution of 7 May 1985 on a new approach to technical harmonization and standards [1985] OJ C 136/1.

ESOs.²⁰⁰ In this context, the ESOs CEN and CENELEC became increasingly important, as did the harmonization of the standards development processes of their members, the NSBs of different European countries.

The negotiations between CEN, CENELEC, the European Commission, and EFTA resulted in an agreement of recognition in 1984, the ‘Memorandum No 4, General guidelines for cooperation between the [European Commission] and the European Free Trade Association (EFTA) and the European standards institutions’. As part of the Memorandum, CEN and CENELEC committed to allow for the representation of representatives of different interests: “In order to establish the grounds for a large recognition of the importance of European Standards, CEN and CENELEC will ensure that the interested circles, especially public authorities, manufacturers, users, consumers, trade unions, can, if they so wish, be effectively associated in the drawing-up of European Standards: the Commission will, should the case arise, help in the definition of the appropriate modalities”. This requirement thus constitutes “balance as openness”, in the sense that CEN and CENELEC are not required to remedy an imbalance in the representation of different interests that may arise from different degrees to which ‘interested circles’ are willing or attuned to participate in standards development. Indeed at the time national standardization organisations were seen as the main vehicle for the involvement of these interests.²⁰¹ The list of interests to be considered is a mix of traditional (users, manufacturers) and societal (consumers, trade unions) interest categories.

This Memorandum was subsequently referenced in the Council Resolution of 1985 establishing the ‘New Approach’ to European standardization.²⁰² In the annexes to the Resolution, the Council emphasizes the significance of the balance requirement set out in the Memorandum by extending its application to any other body other than CEN/CENELEC that might be entrusted with the development of harmonized European standards.²⁰³

One such body is the European Telecommunications Standards Institute (ETSI), the third ESO, which was created in 1988. The creation of ETSI occurred after the New Approach. It is the direct consequence of the liberalization drive in European telecommunications, which began with a 1987 Green Paper issued by the European Commission.²⁰⁴ In the 1987 Green Paper, the European Commission recognized the strategic significance of quick and efficient standardization in order to open up the European telecommunications market, modernize the industry and catch up with the U.S. and Japan.²⁰⁵ Standardization efforts were hampered by the need to coordinate between the IT industry, which worked through NSBs within the CEN/CENELEC structure, and the telecommunications sector, where standardization was carried out by the state monopoly providers, acting through the Conférence européenne des postes et télécommunications (CEPT).

²⁰⁰ *Id.*

²⁰¹ See Council Resolution of 4 November 1988 on the improvement of consumer involvement in standardization [1988] OJ C 293/1.

²⁰² *See*, note 199, *supra*.

²⁰³ Council Resolution 1988, *supra* note 201, at 6.

²⁰⁴ European Commission, Towards a Dynamic European Economy: Green Paper on the Development of the Common Market for Telecommunications Services and Equipment COM(1987)290 (30 June 1987) [1987 Green Paper].

²⁰⁵ This was the time when a group of operators and manufacturers, known as the Groupe Spécial Mobile (GSM), was completing work on a new and promising European standard for 2nd-generation mobile communications.

In addition, since the Commission was proposing to separate the regulatory and operational functions of the state and monopoly providers on the way to liberalizing the market, the CEPT approach was no longer sustainable.²⁰⁶ The rationale for the creation of ETSI is encapsulated in a few sentences:

[CEPT and CEN/CENELEC] have to continue to work on the basis of non-industrial working methods, based on working group meetings and part-time availability of [public-sector] experts. Co-ordination with industry which is now indispensable, has been strengthened, but is still not on a permanent working level [...] It is now time to consider [...] the best way to establish industrial working methods based on permanent teams, including an increased contribution by industrial and user experts [...] The only efficient solution for creating a permanent basis will be the establishment of a stable physical centre. Such a European Telecommunications Standards Institute could provide the permanent core functions on which the acceleration of standards work can be based.²⁰⁷

In line with the European Commission proposal, ETSI breaks with the model of CEN/CENELEC, in favor of direct involvement of stakeholders. From the very start, the EU institutions wanted ETSI to regroup manufacturers and operators. 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 specifically defined categories: "Administrations; Other Governmental Bodies; National Standards Organizations; Network Operators; Manufacturers; Users; Service Providers; Research Bodies; Universities; Consultancy Companies/Partnerships; Others." These categories are used to support certain (limited) clauses in support of a balance between these different interest groups; e.g. the chair and vice-chair of the General Assembly should not be representatives of the same category (RoP 4.3), "The General Assembly may decide to allocate a number of reserved seats on the Board to ensure representation of specific membership categories (e.g. User, SME)." (Rules of Operation, para. 2), and "Composition of the Finance Committee ... as well as duration of the tenure of its members shall be fixed by the General Assembly in order to allow, with a minimum size, for fair representation of the various categories of ETSI members." (Art. 2.1. of the Financial Regulations). For the purposes of determining membership dues and voting rights, members of certain categories (Small and Medium Enterprise (SME), University, User Association, Trade Association) are also grouped into the lowest class of membership, whereas the dues and voting rights of members in other categories are calculated as a function of the company's annual turnover. These rules thus provide for some minimal balance between different categories, while at the same time vesting the bulk of the decision-making power with the largest companies among ETSI's membership.

²⁰⁶ Within CEPT, state monopoly providers were represented as national telecommunications administrations, in charge of regulation and service provision. The Green Paper proposed to turn CEPT into the association for the regulatory elements of the State monopoly providers, to the exclusion of the newly-separated operational firms (that would go on to form ETNO). Keeping standardization within CEPT would have kept service providers out of the loop.

²⁰⁷ 1987 Green Paper, *supra* note 204 at 112-113.

The European Commission pushed for a centralized European standardization system in its 1990 Green Paper on European Standardization.²⁰⁸ Without a doubt, the overarching goal of this policymaking round was to increase the efficiency of standardization in the EU by reforming standardization processes and shifting the center of gravity away from NSBs towards ESOs. If that were to occur, however, the ESOs would need to strengthen the representation of non-industrial interests in their midst, in order to ensure that European-level standardization is accountable and legitimate. Indeed at the time CEN and CENELEC relied on NSBs to achieve that representation at a national level, and ETSI comprised mostly industry members.²⁰⁹ While the Commission proposals for greater centralization were rejected,²¹⁰ 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.²¹¹ ESOs were also urged to work more closely with “economic and social partners”, including SMEs.

In the Report that opened the subsequent policymaking round at the turn of the 21st century, the Commission remained concerned primarily with the efficiency of European standardization, but it also emphasized accountability, in keeping with the ongoing debates on governance in the European Union after the Maastricht Treaty.²¹² The Commission set out its definition of accountability, which builds on the principles listed in the previous paragraph, as they emerged from the previous policy cycle. There was no mention of balance as such, but nonetheless the statements made reflect a concern for both traditional and societal balance. Accountability requires, among others, 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”.²¹³

When it comes to specific recommendations for improvement, the Commission is concerned with societal balance first and foremost, requesting that CEN and CENELEC include European-based workers, consumers, environmental and industry representatives in “strategic discussions and the elaboration of policy”.²¹⁴ Accountability is used in the analysis as a distinctive feature that separates ESOs and NSBs from private consortia, that in the eyes of the Commission operate efficiently but lack legitimacy and accountability.²¹⁵

The European Parliament²¹⁶ and the Council²¹⁷ both endorsed the Commission policy proposals. In particular, the Council in its Resolution set the aim of a “high degree of acceptability as a result of the full involvement of all relevant interested parties in the standardisation process”.

²⁰⁸ European Commission, Green Paper on the Development of European Standardization : Action for Faster Technological Integration in Europe COM(90)456 (8 October 1990).

²⁰⁹ *Id.* at 35.

²¹⁰ The Commission found no support amongst stakeholders: see the summary of the round of consultations in the Commission Communication on standardization in the European economy [1992] OJ C 96/2.

²¹¹ Council Resolution of 18 June 1992 on the role of European standardization in the European economy [1992] OJ C 173/1.

²¹² Commission Report on efficiency and accountability in European standardization under the New Approach COM(1998)291 (13 May 1998) [hereinafter 1998 Commission Report].

²¹³ *Id.* at 4.

²¹⁴ *Id.* at 10.

²¹⁵ *Id.* at 5.

²¹⁶ European Parliament, Resolution of 12 February 1999 [1999] OJ C 150/624.

²¹⁷ Council Resolution of 28 October 1999 on the role of standardization in Europe [2000] OJ C 141/1.

It invited “the European standards bodies to develop or improve existing mechanisms, supplementing consensus at national level, allowing them to give broad consideration to the positions expressed by the various interest groups during the standardisation process” and stressed “that interested parties such as workers, consumers, and environmental interest groups should be fully involved in the standardization process at all relevant stages” Perhaps more clearly than the Commission in its Report, the Council did not dwell on the traditional notion of balance as parity between the representation or influence of different commercial stakeholder groups. Rather, it emphasizes the role of *societal* balance, and in particular adequate representation of potentially under-represented interests.

One notable offspring of the 1999 Council Resolution was a Commission paper exploring the interplay between the European principles set out above and the principles found at international level in WTO law.²¹⁸ There, 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”.²¹⁹ The traditional notion of balance is once more explicitly supplemented by societal balance, to which the Commission invites the WTO (and by the same token international SDOs) to give greater weight. The Council approved the Commission analysis in a subsequent set of conclusions.²²⁰

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 of Memorandum 4 signed in 1984). The paragraph on balance of interests now reads as follows:

For their part, the European Commission and EFTA expect the European Standards Organizations CEN, CENELEC and ETSI to:

[...]

Ensure that structures and procedures allow for the highest possible degree of openness, transparency and representativeness. Procedures should be transparent and ensure independence from vested interests. Further efforts should be made to increase the participation of interested circles, especially public authorities, manufacturers, small and medium-sized enterprises, consumers, workers and environmental interest groups, at the national and European level in the drafting of standards and other deliverables and in ensuring their views are adequately taken into account.

From 1984 to 2003, there were thus some noteworthy changes. First, the list of interests has changed: while “users” were removed as a group, SMEs and environmental interest groups were added, and trade unions replaced by “workers”. Replacing the traditional interest category “users” with societal groups such as SMEs and environmental interest groups is indicative of the transformation of the underlying notion of balance. In addition, the European Commission and

²¹⁸ Commission Staff Working Paper on European Policy Principles on International Standardisation SEC(2001)1296 (26 July 2001). This Paper followed a request from Council in its 1999 Resolution, *ibid*. The WTO principles are found in the decision of 10 November 2000 taken under the TBT Agreement, WTO/G/TBT/9.

²¹⁹ Staff Working Paper, *id*, at 4, 8.

²²⁰ Council Conclusions of 1 March 2002 on standardisation [2002] OJ C 66/1.

EFTA expect increasingly proactive steps from CEN and CENELEC to achieve greater societal balance. While the earlier version of the agreement merely required the ESOs to “ensure that [different interest groups] can, if they so wish, effectively be associated”, the version of 2003 states that “Further efforts should be made to increase the participation of”. The balance requirement thus morphed from a principle of equal rights to participate to a responsibility to ensure adequate representation, in particular of potentially under-represented groups. The new version also features a new principle of independence of the ESOs from vested interests; and no longer suggests that the Commission could help in defining the modalities for the representation of different interests.

Perhaps the most striking change is that the status quo of broad representation of different interests in European standardization is now explicitly portrayed as unsatisfactory. Rather than holding the SDOs to their own, self-determined principles, the European institutions request the ESOs to initiate changes (“further efforts should be made”).

This increased emphasis on societal balance, and the requirement to proactively encourage greater representation of certain stakeholder groups, is reflected in CEN’s Internal Regulations [applicable to CEN members, i.e. the European NSBs]:

The Member shall keep an impartial and independent position by ensuring an appropriate balance of the interests represented in the standards development process, i.e. private and public, economic, societal and environmental interests. The Member’s rules shall grant the same right to all stakeholders actively involved in the standardization work to express their opinions and to have them duly taken into account.

The Member’s rules shall ensure that all contributions are duly considered without favouring or ignoring any of them.” First, the list of interests (private and public, economic etc.) clearly refers to societal balance rather than balance between different industrial stakeholder groups; second, the requirement requires (1) impartiality of the organization itself, and (2) equal rights to participate for different interest groups (but does not seem to require parity in representation).

Other stipulations in the Internal Regulation are also relevant, in particular:

“2.3 Principle of appropriate representation of the stakeholders' interests in the Technical Bodies - The Member shall have a process in place to identify and take into account the needs of all stakeholders, with a view to facilitating appropriate representation and participation.”

The principle of “sustainable development”, despite its name, is also a form of balance requirement:

“Sustainable development is a means of expressing the broader expectations of society as a whole. This includes promoting and facilitating the involvement of all stakeholders, including potentially under-represented stakeholders such as SMEs and representatives of societal interests, in the development of standards, so as to ensure representation in a real multi-stakeholder-process.”

The next policy round followed from the EU-level discussions on growth, jobs and innovation.²²¹ A European Parliament resolution²²² 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 2015/2012 reaffirms the European approach to balance, which focuses on societal balance but also alludes to traditional balance. As the Commission states, “strong consensus is vital for a standard to be accepted and used by industry. Acceptance of the standard by other stakeholders is important in those areas where standards are used in support of public policy and legislation”.²²³ Interestingly, as part of the first plank – traditional balance expressed as consensus amongst the industry stakeholders – the Commission insists on adequate representation of SMEs, through the NSBs (for CEN and CENELEC) and directly within ETSI. The second plank, societal balance, is particularly relevant when standards touch upon public policy (performance standards), and it involves better representation of consumers, trade unions, environmental NGOs, among others.²²⁴ In addition, the Commission signals a change in how fora and consortia are treated under EU law: whereas 10 years earlier they were dismissively considered to fall short on legitimacy, they are now seen as a useful source of complementary standards, as long as these fora and consortia follow the same “quality criteria” as ESOs, including openness, transparency and neutrality.²²⁵

These policy discussions hence did not lead to significant changes in the basic principles (emphasis on societal balance, proactive steps towards sufficient representation of certain groups). These principles underlie the enactment that arose out of the 2008-2012 policy round, now the current legislative framework for standardization in Europe, namely Regulation 1025/2012.²²⁶ The recitals to Regulation 1025/2012 explain how stakeholder representation is essential to the success of standardization.²²⁷ 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.²²⁸ In order to ensure meaningful participation, the Regulation even provides for EU funding of stakeholder organisations for those purposes.²²⁹

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.²³⁰ The only explicit mention of a balance requirement in Regulation 1025/2012 can be found in Annex

²²¹ See the Commission communication “Towards an increased contribution from standardization to innovation in Europe” COM(2008)133 (11 March 2008) and the White Paper “Modernising ICT Standardisation in the EU – The Way Forward” COM(2009)324 (3 July 2009), which initiated the discussions.

²²² European Parliament Resolution of 21 October 2010 on the future of European standardisation [2010] OJ C 70E/56.

²²³ Commission Communication “A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020” COM(2011)311 (1 June 2011) at 11 (*see also id.* at 5).

²²⁴ On that point, the Commission advocates looking to the ISO “alternative production line” (used for ISO 26000) for inspiration. *Id.* at 12.

²²⁵ *Id.* at 15-17.

²²⁶ Regulation 1025/2012 on European standardisation [2012] OJ L 316/12.

²²⁷ *Id.*, rec. 17, 20, 22.

²²⁸ *Id.*, Art. 5, 6 and 12.

²²⁹ *Id.*, Art. 16.

²³⁰ *Id.*, rec. 23.

II, which sets out the conditions under which ICT standards developed by SDOs *other than ESOs* can be recognized for public procurement purposes in the EU.²³¹ In order 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”.

Following the enactment of Regulation 1025/2012, these basic principles remained unchanged. In the subsequent policy round, launched in 2016,²³² the emphasis was shifted to implementation and integration at the EU level.²³³ The ESOs, the NSBs, the Commission and the stakeholders (industry, SMEs, workers, environmental organizations and citizen groups) together form the European Standardisation System (ESS). In 2016, the Commission launched a Joint Initiative on Standardisation (JIS) to improve the functioning of the ESS.²³⁴ Amongst its first set of actions, the JIS was tasked with fostering inclusiveness, transparency and effective participation of all stakeholders in the ESS, facilitating participation of all stakeholders at the national level, and improving the representation of European SMEs and societal stakeholders’ interests in international standardization processes.²³⁵ In other words, a high-level forum including all stakeholders was created outside of the established SDOs – and to some extent above them – in order to put pressure on those SDOs, at national, European and international levels, to improve stakeholder representation. Coordination has also been improved through the introduction of an Annual Union Work Programme (AUWP) for European standardization, wherein the Commission communicates its priorities to all stakeholders.

Over the last 35 years of European standardization policy, as outlined in the previous paragraphs, the EU has had to deal with significant changes in the standardization ecosystem and with the spillover from major EU-level policy debates. In the 1980s and early 1990s, the EU-wide drive for regulatory efficiency and trade liberalization led to the New Approach; in terms of balance, the emphasis was on traditional balance between potentially conflicting industry interests. Such balance was traditionally ensured within the NSBs that made up CEN and CENELEC. Yet when ETSI was created as a new, third ESO, it followed a different model, whereby balance was directly sought in the membership of the ESO. The co-existence of these two different models – national representation for CEN and CENELEC, direct industry membership for ETSI – made it unavoidable that they would be compared. As a consequence, EU standardization policy has been trying to “lift the veil” of national representation ever since the 1990s, in order to compel NSBs to meet EU-level expectations, in particular as regards procedural principles linked to balance, such as openness, transparency and consensus.

²³¹ *Id.*, Art. 13.

²³² The round was launched with a “standardisation package”, i.e. a set of policy and administrative documents issued by the Commission in June 2016. The central piece was the Communication “European Standards for the 21st Century” COM(2016)358 (1 June 2016).

²³³ See European Parliament Resolution of 4 July 2017 on European standards for the 21st century, P8_TA(2017)0278, point 16 (expressing satisfaction with the content of Regulation 1025/2012 as far as balance is concerned, and calling for better implementation).

²³⁴ The initiative had been announced in the European Commission Communication Upgrading the Single Market: more opportunities for people and business, COM(2015)550 (28 October 2015) at 12.

²³⁵ *Id.* at 12.

In the late 1990s and 2000s, legitimacy and accountability came to the fore, in the wake of the post-Maastricht governance crisis in the EU. This is where the EU started to emphasize societal balance, in addition to traditional balance. The two were often bundled together in policy documents, but since the early 2000s the key policy documents posit that traditional balance corresponds to what is required under WTO law, and societal balance is an additional European requirement. The EU has gone very far in order to ensure that weaker stakeholders are represented not only in standardization processes, but also in SDO governance. The main stakeholders in the eyes of the EU whose adequate representation should be ensured are trade unions, consumer associations, environmental NGOs, and SMEs. Since the mid-2000s, standardization has gained in strategic significance for the EU, especially when innovativeness became an EU-wide priority. 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, it became a condition for the latter to achieve recognition within the EU, as set out in Regulation 1025/2012. Nowadays, one of the main functions of the overarching coordination bodies, such as the Joint Initiative on Standardisation (in general) or the Multi-Stakeholder Platform (for ICT standards specifically),²³⁶ 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 U.S., industry stakeholders however often found it advantageous to create additional fora for standardization. One such organization is the Digital Video Broadcasting (DVB) project, which resulted 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.”²³⁷ As a contribution to creating this necessary trust between different interest groups, the MoU provides for 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, with specific numbers of seats reserved for each “constituency”.²³⁸ Furthermore, no decision can be adopted that has not been approved by a majority of the representatives of each constituency.²³⁹

²³⁶ See Decision of 28 November 2011 setting up the European multi-stakeholder platform on ICT standardisation [2011] OJ C 349/4.

²³⁷ <https://dvb.org/about/history/>, last consulted on 1/17/2021.

²³⁸ DVB Memorandum of Understanding, Article 6.1.

²³⁹ *Id.*, Article 6.4.

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 also started to be applied to standardization activities.

Starting with the XOpen case in 1996,²⁴⁰ the Commission became concerned that standardization would be used in order to give an advantage to one competitor (or one set of competitors) over others. It was perceived that the remedy for this risk is openness and participation. Hence the Commission insisted on ensuring that all interested parties were able to participate in standardization, and that interested manufacturers had access to each standard, in order to 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.²⁴¹ The Commission emphasizes 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.²⁴²

With the standardization of mobile telecommunications technology and the creation of ETSI in 1988, the intersection between standardization and Intellectual Property Rights (IPR) 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 took place in the context of debates within ETSI regarding its IPR policy, opposing the interests of network operators (favoring strict licensing obligations for SEPs) and manufacturers (defending the rights of patent owners).²⁴³ 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 due to an imbalance in the representation of manufacturers' and operators' interests within ETSI.²⁴⁴ The policy faced significant resistance, including a competition law complaint by a business association representing manufacturers to the European Commission. The European Commission however did not decide the merits of the complaint, as ETSI revised its policy and abandoned the controversial provisions in November 1994 "in order to achieve greater consensus amongst ETSI members."²⁴⁵ 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 standardization for public use in the field of telecommunications and the rights of the owners of IPRs." The area of IPR is the only context in which ETSI's process documents make explicit mention of a balance requirement.

²⁴⁰ Decision of 15 December 1986, X/Open Group [1986] OJ L 35/36.

²⁴¹ Guidelines on the applicability of Article [101 TFEU] to horizontal cooperation agreements [2001] OJ C3/2 at para. 163.

²⁴² *Id.* at 172.

²⁴³ See generally Iversen, E. J. (1999). Standardization and Intellectual Property Rights: ETSI's controversial search for new IPR-procedures.

²⁴⁴ Rudi Bekkers, Geert Duysters, Bart Verspagen, *Intellectual property rights and standardization: The case of GSM*, 26 TELECOMMUNICATIONS POL. 171, 180 (2002) ("The proposal was accepted mainly due to the considerable power that former telecom administrations have in ETSI, compared to that of the manufacturers and other actors" (citing Besen, 1990; Paffen, 1996; CBEMA, 1993)).

²⁴⁵ Notice pursuant to Article 19 (3) of Council Regulation No 17 (I) concerning case No IV/35.006 — ETSI interim IPR policy.

Perhaps due to the controversies at ETSI, the DVB project 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.²⁴⁶

The Horizontal Guidelines were renewed in 2010, taking into account the Commission practice on IPR policies in SDOs.²⁴⁷ The general analysis set out in the 2000 Guidelines is further developed, with the emphasis being put once again on participation as the main path to achieving balance:²⁴⁸

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 [emphasis in the original].

The concept of balance comes into the discussion when it comes to the more specific issue of the IPR policy. The 2010 Guidelines define a safe harbor for SDOs complying with certain criteria, including a “balanced and clear IPR policy”. This safe harbor entails that these SDOs “would normally fall outside the scope of Article 101(1)”, i.e. not violate competition law prohibitions against restrictive agreements. According to the Guidelines, balancing would refer to the balance between the interests of different groups of participants (IPR holders, pure manufacturers, vertically-integrated firms) in the IPR policy.²⁴⁹ The Communication on SEP of 2017 greatly insists on the need for a “balanced approach” (10 mentions), yet it does not go any further than the 2010 Horizontal Guidelines in defining balance.²⁵⁰

V. THE MEANING OF BALANCE IN STANDARDIZATION

Despite a widespread recognition that some degree of balancing of interests is appropriate and desirable in standards development, the historical account set forth in Parts II, III, and IV demonstrates that this important feature of standardization has developed along multiple independent pathways both in the U.S. and Europe. Variations are observed in both the conceptualization of *whose* interests should be weighed in any effort toward balancing, as well as the standard against which balancing efforts should be legally measured and assessed. We discuss each of these axes of comparison, and then offer our observations and conclusions.

²⁴⁶ Carter Eltzroth, *IPR Policy of the DVB Project: Negative Disclosure, FR&ND Arbitration Unless Pool Rules OK, Part 1*, 6 J. IT STANDARDS & STANDARDIZATION RES. 21, 30 (2008).

²⁴⁷ Guidelines on the applicability of Article 101 [TFEU] to horizontal co-operation agreements [2011] OJ C 11/1.

²⁴⁸ *Id.* at para. 281. See also para. 295 and the examples given at para. 331 and 332.

²⁴⁹ *Id.* at ¶¶ 284-85.

²⁵⁰ European Commission, Setting out the EU approach to Standard Essential Patents COM(2017)712 (29 November 2017).

A. TYPES OF INTERESTS TO BE BALANCED

1. *Traditional and Societal Balance Categories*

The traditional view of SDO interest balancing involved 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 in order 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,²⁵¹ 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 then refusing to deal with vendors who did not comply with those standards. In spite of 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.

In addition to seeking a balance of interests between different industrial and commercial concerns at different points in the supply chain, 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 effort to legitimize the private assumption of regulatory duties.²⁵² 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 1025/2012.²⁵³

²⁵¹ *NSS Labs, Inc. v. CrowdStrike, Inc.*, Case No. 3:18-cv-05711 (N.D. Cal., filed Sep. 18, 2018).

²⁵² See CATHERINE E. RUDDER, A. LEE FRITSCHLER & YON JUNG CHOI, *PUBLIC POLICY MAKING BY PRIVATE ORGANIZATIONS: CHALLENGES TO DEMOCRATIC GOVERNANCE* 118 (2016) (“the democratic legitimacy of private and public-private [standards in the area of food safety] should be improved by increasing its transparency and broadening the voices involved in policy making”).

²⁵³ Regulation 1025/2012, Art. 5, compels ESOs to achieve representative and participation of all relevant stakeholders in their activities. For that purpose, pursuant to Art. 16 of the Regulation, the EU budget provides for the financing of European stakeholder organisations representing SMEs, consumers, environmental interests and social interests.

There is significant variation in the categories that are explicitly mentioned by different SDOs and regulatory instruments in this regard. An early and prominent societal group whose interests SDOs seek to account for was consumers. ANSI and ASTM in the U.S. and DIN and BSI in Europe are examples of SDOs offering opportunities for the representation of consumer interests in standardization activities and SDO governance.²⁵⁴ Other societal interests considered in standardization activities may include environmental interest groups, labor, and science. Nevertheless, discussions of balance typically focus on the opposition between industry as a whole and other interests, such as consumers, government, civil society, labor, etc. 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.²⁵⁵ In some discussions, industry is sliced into different groups, most notably small and large corporations, where SMEs are added to the list of interests that need to be protected against domination of standards by large companies.

Another difference resides in the means that have been contemplated to achieve the 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 numerically equalizing the composition of standardization committees among experts affiliated with each group. Some proposals made in the 1970s seeking a more general balance of interests in standards development either did not explicitly mention balanced committee composition, or expressly described it as an inadequate tool for achieving the desired balance. Other proposals however explicitly refer to balance in membership composition as a necessary means of ensuring adequate representation.²⁵⁶

Extending the traditional practice of balancing committee composition to the more recent, broader lists of societal interest categories, however, created fundamental theoretical and practical problems.²⁵⁷ Unlike the representatives of industrial users and producers of standardized products, there are few qualified experts volunteering to represent consumers, labor, or environmental concerns in standardization. As observed by Dieter Ernst and collaborators, “standardization is a highly knowledge-intensive activity that requires well educated and experienced engineers and

²⁵⁴ See notes 31, 50-53 and 162-163, *supra*, and accompanying text.

²⁵⁵ This is also consistent with ASTM’s explicit quota requirement, seeking to ensure that representatives of producers do not outnumber representatives of all other groups. See notes 25-26, *supra*, and accompanying text.

²⁵⁶ 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 House of Representatives: “It is the subcommittee’s conclusion that consumer representatives should be in the preponderance on standards committees.” – a far cry from the actual representation of consumers in standardization processes then and today. Final Report of the Select Committee on Small Businesses of the House of Representatives, *supra* note 31, at 181,

²⁵⁷ Hamilton, *Prospects*, *supra* note 57, at x.

other professionals”,²⁵⁸ skills that are often lacking outside of the firms directly engaged in standardization activity.²⁵⁹

Moreover, those purporting to speak on behalf of a particular interest category can not necessarily be trusted to represent all, or even most, members of that category. As Rudder and collaborators observe, “To call a representative ‘public’ without a clear demonstration of the person’s connection to the public is meaningless. Can there be meaningful representation of the public outside of free and fair elections...?”²⁶⁰ Moreover, even academics and government officials have been accused of representing partisan interests in standardization activities, further eroding the value of this form of representation.²⁶¹

Compounding the difficulty of identifying willing, qualified and unbiased representatives of broader social 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.²⁶²

Given 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.²⁶³ Yet these sporadic efforts have not resulted in significant levels of participation by representatives of such constituencies in most standardization activities.²⁶⁴

²⁵⁸ Dieter Ernst, Heejin Lee & Jooyoung Kim, *Standards, Innovation and Latecomer Economic Development: Conceptual Issues and Policy Challenges*, 38 TELECOMMUNICATIONS POLICY 853, 855 (2014). See also Morris, *supra* note 160, 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, *Roles*, *supra* note 26, at 1385 n. 157.

²⁵⁹ This being said, some standardization activities are driven not by large ICT firms, but by interested individuals and non-corporate communities. For example, IEEE Working Group P2890 - Recommended Practice for Provenance of Indigenous Peoples’ Data (<https://standards.ieee.org/project/2890.html>) was formed by academics, philanthropic organizations and members of indigenous communities, and does not have substantial corporate involvement. However, the engagement of this working group’s members with standardization is not likely to lead to their greater involvement with more complex ICT standards, as their goals are relatively specific to this project, and not directed generally toward product or technology standardization.

²⁶⁰ RUDDER ET AL., *supra* note 252, at 155.

²⁶¹ FTC 1983 Report, *supra* note 82, at x.

²⁶² See TIM BÜTHE & WALTER MATTLI, THE NEW GLOBAL RULERS: THE PRIVATIZATION OF REGULATION IN THE WORLD ECONOMY 222-24 (2011); CARGILL, *supra* note 153, at 108 (“while the [standardization] process is open to both the rich and the poor, the rich have easier access to it”).

²⁶³ See notes 31, 162 and 163, *supra*, and accompanying text.

²⁶⁴ See BÜTHE & MATTLI, *supra* note 262, at 222 (“consumer participation in international product standardization ... is strikingly weak”); JRC Report, *supra* note 2, at 120.

2. *Vertical versus Horizontal Stakeholder Categories*

The relationship among the traditional categories of interests to be balanced is largely vertical. That is, producers of standardized products – automotive parts, electrical components, synthetic fibers – stand in a vertical relationship to the industrial purchasers of those products – manufacturers of cars, computers and apparel, as well as wholesalers and retailers. These industrial purchasers likewise stand in a vertical relationship to consumers, workers, environmental interests, and the like. And, in the case of *NSS*, producers of cybersecurity solutions stand in a vertical relationship to security certifying bodies that assess their products.

Over the past few decades, however, there have been increasing calls for SDO balance among competing horizontal interests. In some cases, individual firms considered that the standardization process had been skewed in favor of a competitor from the same industry (as alleged in *ASME v. Hydrolevel*).²⁶⁵ 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*.²⁶⁶

According to some organizations' definitions, the requirement not to skew standardization processes in favor of individual firms or individual technical solutions is the goal of a separate procedural requirement – absence of dominance – which must be distinguished from balance.²⁶⁷ Nevertheless, other organizations define balance as a state in which “standards activities are not exclusively dominated by any particular person, company or interest group.”²⁶⁸

Disputes over technical choices, and the exclusion of one vendor's solution over another's, continue to arise in standards-development, with associated antitrust claims. Such claims were raised, for example, in *Addamax v. OSF*,²⁶⁹ *TruePosition v. Ericsson*²⁷⁰ and *Golden Bridge v. Motorola*.²⁷¹ These disputes involved allegations of an imbalance in the standardization process, resulting e.g. 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.

Of course, actions skewing the balance between competitors also may result in an imbalance between interest categories protected by an SDO's balance requirements. Nevertheless, this does not imply that traditional or legal balance requirements obligate SDOs to balance the membership of standardization committees between competing firms or proponents of competing technology solutions. Indeed, such a requirement would seem to undermine the ability of SDOs to make technical choices. Standards organizations exist to select among different technical solutions such

²⁶⁵ See notes 103-106, *supra*, and accompanying text.

²⁶⁶ See notes 108-116, *supra*, and accompanying text.

²⁶⁷ See e.g. ANSI's *Guidance on Balance and Outreach* document from 2016: “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 143.

²⁶⁸ See OpenStand Principles, *supra* note 161.

²⁶⁹ *Addamax Corporation v. Open Software Found.*, 152 F.3d 48 (1st Cir. 1998).

²⁷⁰ *TruePosition, Inc. v. LM Ericsson Telephone Co.* 977 F. Supp. 2d 462 (E.D. Pa. 2013).

²⁷¹ *Golden Bridge v. Motorola*, 547 F.3d 266 (5th Cir. 2008).

as steel and plastic as appropriate materials for electrical conduit. Requiring a consensus between plastic and steel makers would undermine that goal. Thus, the Court in *Allied Tube* did not require that standards committees be balanced between competing commercial interests; but only that the standardization process not be stacked in favor of one solution to the detriment of the other.

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 resulted from a recognition that any standard will only be used if it is acceptable to both of these groups. When the interests of producers and users diverge, such as in the case of steel makers and railway companies, a standardization process that only reflects the voices of users or producers would often fail to achieve the necessary compromise between divergent interests.

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.²⁷² This necessary trust would be undermined by a process that is lopsided 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. This being said, it should also not withhold a technically justified choice merely to balance rivaling special interests.

Balancing committee composition along interest categories may nevertheless support the elimination of bias in the process. A committee stacked with representatives of a certain type of producer (as in *Allied Tube*) is unlikely to be unbiased. In a balanced committee that includes an adequate mix of representatives of different types of producers, users and other relevant interest groups, any group of particular interests must convince a large group of others of the technical merit of their proposed solution. The legitimacy of the process does not result from parity in the representation of different types of competing producers, but from the fact that no group alone can enact standardization decisions without the support of other constituencies that have no vested interest in the competing solutions. While balancing representation by different interest categories may thus 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.²⁷³ As

²⁷² E.g. builders relying on NFPA’s standards for choosing a fire-proof material for electrical conduit, or an industrial customer relying on ASME’s “Boiler and Pressure Vessel (BPV) Code” when choosing a safe boiler control device

²⁷³ See note 165, *supra*, and accompanying text.

discussed above, this debate has centered largely around “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 involve 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 policy making signifies a return to a vertical notion of balance, where balance is not intended to allow for unbiased consideration of competing solutions, but to find a middle ground between the conflicting interests of different commercial constituencies that are vertically related to each other through business relationships that are impacted by an SDO’s decisions. Similar to 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 their policies need to garner support from both groups of firms in order for their standards to succeed in the market.²⁷⁴

Societal balance has moved to the background in these debates. Consumer welfare is frequently invoked – the sides arguing, respectively, that consumers are better off with lower-priced products or greater incentives for new product 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.²⁷⁵ This is similar to what has been observed in the context of cases such as *Hydrolevel* and *Allied Tube*, which were waged between commercial stakeholders without significant participation by consumer interest groups, even though the disputes were later used to justify policy proposals intended to promote consumer representation.

In spite of 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.²⁷⁶ Neither of these dimensions is fully aligned 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

²⁷⁴ Malcolm Johnson, Director of ITU’s Telecommunication Standardization Bureau, e.g. stated in 2014 “A well-balanced IPR policy is likely to attract all types of stakeholders to the standardization process. However, if the IPR policy overly favours patent holders, then the standard may not meet users’ needs, and not be readily implementable. Similarly, if the IPR policy overly favours users, then patent holders may decide not to contribute their technology to the standardization process”. ITU Telecommunication Standardization Bureau, *Understanding patents, competition & standardization in an interconnected world*, 2014, at 55.

²⁷⁵ JRC Report, *supra* note 2, at 169.

²⁷⁶ 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 **Error! Bookmark not defined.**, 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 165.

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,²⁷⁷ 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.²⁷⁸

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 BRL recognized that a revision of an SDO’s IPR policy through an unbalanced process may raise antitrust concerns.²⁷⁹

²⁷⁷ “At AFNOR, decisions in technical committees on standard development are never taken by vote, and are always adopted by consensus. By contrast, AFNOR’s governance body, the Comité de coordination et de pilotage de la normalisation (CCPN), and the board of directors of AFNOR can make decisions on rule changes by majority vote. AFNOR explains this difference by noting that technical committees are open to everybody, whereas the CCPN and board of directors have a clearly defined membership, which is balanced among different constituencies.” See JRC Report, *supra* note 2, at 99.

²⁷⁸ 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, 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 170 at 11. The DOJ’s 2018 letter to ANSI similarly cautioned that “If an SSO’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 170.

²⁷⁹ See DOJ 2015 IEEE Letter, *supra* note 173.

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 19 th century; dormant for 2nd half of 20 th century;	Resurgence now in context of IPR policies	Since the 1960s	Since the 1980s
Theory of harm	<i>Standardization</i> 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	<i>Policy development</i> 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 (i.e. technological) justification, thus skewing competition between these solutions in the market
Antitrust / competition law provisions at stake	Primarily § 1 Sherman Act and Art. 101 TFEU		None	§ 1 or § 2 Sherman Act; Art. 101 or 102 TFEU (depending on the facts)
Implication for SDO (baseline)	Ensure that interest groups are represented and cannot collude against one another	In addition to implication on the left: ensure that resulting policies are balanced	Ensure that stakeholders are represented	Ensure that standardization is carried out objectively; absence of dominance of standardization processes by a single interest group
More specific initiatives taken by SDOs to address concern	<ul style="list-style-type: none"> - Balanced committee composition (quota) - Assess support within each interest group - Documented outreach - Consensus decision-making 	In addition to initiatives on the left: <ul style="list-style-type: none"> - Baseline IP policy (disclosure, FRAND commitment) 	<ul style="list-style-type: none"> - Aim for balance amongst mix of stakeholder groups - 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

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 in order to achieve the desired degree of balance among those competing interests. A number of different 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: (1) requirements that individual SDOs have voluntarily chosen to adopt; these requirements may be very stringent and specific; (2) requirements that are imposed on only a set of SDOs with a privileged status in their country or region, or requirements governing whether an SDO may qualify for certain advantages, such as accreditation, government use of their standards, or antitrust liability protections; these requirements are usually general and flexible; and (3) requirements that are mandatory for all SDOs as a matter of law; these are even more general, and in both Europe and the U.S. there is only limited guidance to define the substance of these requirements.

These categories are largely orthogonal to the distinctions between different types of balance requirements discussed in Part V.A. Considerations of each of the different types of balance are potentially relevant to the requirements voluntarily chosen by individual SDOs, requirements applicable to specific SDOs or attached to specific advantages, and requirements generally applicable to all. Nevertheless, some types of balance requirements are more relevant at different levels than others. Societal balance, for example, is particularly relevant to specific SDOs with a privileged status, such as NSBs and ESOs, and for SDOs' standards to qualify for government use, whereas general antitrust requirements and SDOs' own traditional balance requirements are mostly concerned with the balance between competing industry interests.

Similar to the distinction between different types of balance requirements, the distinction between different levels of obligation is applicable in both Europe and the U.S. Government use of industry standards is governed by different systems in the two regions. While Europe has a system of official recognition of NSBs and ESOs, U.S. federal agencies are required under OMB Circular A-119 to rely on voluntary consensus standards (i.e., developed under systems that include balance).²⁸⁰ There are thus notable differences between Europe and the U.S. 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 the balance requirements voluntarily chosen by individual SDOs or the balance obligations generally applicable to all SDOs fundamentally differ between Europe and the U.S.

At one end of the spectrum, there are the very stringent, explicit and specific balancing requirements of individual SDOs. SDOs such as ASTM and DVB, for example, categorize their members in different categories, and numerically balance the representation of these categories for voting purposes. These policies are imposed purely by choice of the SDO's governing body as representative of its membership.²⁸¹ These specific balancing processes are clearly not required of

²⁸⁰ See, generally, Emily S. Bremer, *American and European Perspectives on Private Standards in Public Law*, 91 TUL. L. REV. 325 (2016).

²⁸¹ See notes 25-26, *supra*, 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,

all SDOs. Some SDOs, such as IETF and W3C, intentionally forego formal balancing measures, but seek to achieve stakeholder balance through open and transparent processes and procedures (what we have termed “practical balance”).²⁸² 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,²⁸³ and the IPR holders and implementers emphasized by ETSI’s and ITU-T’s commitments to IPR policy balance.

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.²⁸⁴ 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 it is viewed as usually achieving ANSI’s own balance requirements), and 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.²⁸⁵ Both ANSI and ISO/IEC expect SDOs to seek a balance between both traditional and societal interest categories.

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, *Roles*, *supra* note 26, 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, *Roles*, *supra* note 26, at 1354-55. Nevertheless, they remain important both historically and in numerous SDO policies today.

²⁸² See Part x, *supra*.

²⁸³ The four constituencies are: Content providers and broadcasters; infrastructure providers and network operators; manufacturers and software suppliers; and governments and national regulatory bodies.

²⁸⁴ The ANSI Balance Guidance, *supra* note 143, 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 representivity or balance of a committee, working group or mirror committee; *ISO Membership Manual*, 2015; at 21. https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/iso_membership_manual.pdf

²⁸⁵ 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 U.S. 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 offer a specified level of balance of interests. In the U.S., 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 schema. 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.²⁸⁶ 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 US DOJ urged the court to test whether AMSTO complied with the procedural requirements underlying the SDOAA, but the antitrust complaint was dismissed before any substantive adjudication of these issues.²⁸⁷

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

²⁸⁶ 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.

²⁸⁷ *NSS Labs, Inc. v. Crowdstrike, Inc.*, Case No. 3:18-cv-05711 (N.D. Cal., filed Sep. 18, 2018).

appears intended to encompass both ANSI's definition of balance, as well as SDOs that rely on general openness and transparency for stakeholder balance.²⁸⁸

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 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 e.g. IPR policy balance.

Another source of 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".²⁸⁹ 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 constitute any direct obligation for private SDOs. Countries that are member 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 territories [...] accept and comply with this Code of Good Practice"; a requirement applicable to their respective standardization regulations as outlined above.

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 U.S. 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."²⁹⁰

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" (*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

²⁸⁸ The *Discussion and Responses to Significant Comments* provided along the revised OMB Circular A-119 in 2016 reveals the ambivalence of the Circular's definition of balance. 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), Supplementary Material, 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."

²⁸⁹ See notes x, *supra*, and accompanying text.

²⁹⁰ DOJ GSMA Letter, *supra* note 172, at 4.

of balance. In *ASME v. 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.²⁹¹ Nevertheless, it did not elaborate on what specific procedures SDOs must adopt or possess in order to prevent violations of antitrust laws. In its Final Staff Report of 1983,²⁹² the FTC built on the Supreme Court's decision in *Silver v New York Stock Exchange*²⁹³ 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 right to a written response.²⁹⁴ 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".²⁹⁵ 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, 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 protection against liability of the SDO for abuses committed by individual participants. However, failure to comply with any of these requirements alone is not an antitrust or competition law violation.

The minimum level of balance required of all SDOs as a matter of competition 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, and otherwise corrupting the legitimate deliberative process – and the general and flexible affirmative balance requirements attached to Circular A-119, the SDOAA, Regulation 1025, and the Horizontal Guidelines.

It seems likely that the minimal balance requirements under generally applicable antitrust laws vary 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 these cases, the originally voluntary standards developed by private SDOs acquired binding effects, e.g. through their

²⁹¹ 456 U.S. at x.

²⁹² FTC 1983 Report, *supra* note 82.

²⁹³ 373 U.S. 341 (1963).

²⁹⁴ See *supra* note x.

²⁹⁵ *Allied Tube*, 486 U.S. at x.

influence on governmental regulation. The effective power that SDOs such as NFPA and ASME wield over entire industries warrants particular antitrust scrutiny,²⁹⁶ but also sets these SDOs apart from numerous smaller and less established consortia that are arguably less capable of producing restrictive effects. The Horizontal Guidelines of the European Commission operate 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.” 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 U.S. DOJ’s 2019 investigation of GSMA sheds additional light on the balance requirements applicable to all SDOs as a matter of antitrust law.²⁹⁷ 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.²⁹⁸

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. 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.

²⁹⁶ “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.”” *Hydrolevel*, 456 U.S. at 570.

²⁹⁷ See DOJ GSMA Letter, *supra* note 172.

²⁹⁸ See *id.*

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

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 and 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 of openness to any interested party and consensus decision-making	IETF, OpenStand principles	Any SDO wishing to adopt an open door policy; SDOs seeking for their standards to be recognized 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; DG COMP 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

VI. CONCLUSION

Balance in SDO decision making is an expected and important aspect of collaborative standardization. Our historical review of international law, US law and EU law allows us to distinguish between different types of balancing requirements. ‘Traditional’ balancing concerns the industrial interests involved in standardization. Within it, a distinction can be made between vertical balancing – where an SDO must avoid that interest groups collude within the SDO to gain an advantage over others, whether in standardization or policymaking processes – and horizontal balancing, where the proponents of one technological solution use the SDO to exclude competing solutions without justification. Next to these two dimensions of traditional balancing, ‘societal’ balancing has also emerged as a concern: it is defined as the balance amongst a broader set of stakeholders, including not only industry, but also consumers, workers and environmental groups, among others.

Antitrust and competition law are concerned with ‘traditional’ balancing, both vertical and horizontal. At some level, they impose constraints on biased SDO processes. But SDOs may select, based on their individual policy preferences, risk aversion and stakeholder composition, what degree of balance they wish to enforce above baseline legal requirements. Some SDOs, such as IETF, may desire to impose no such balance requirements, relying instead on openness and transparency to ensure a fair and legitimate process – what we term “practical balance”. SDOs that wish their standards to be adopted by U.S. federal agencies or used for public procurement purposes in the U.S. and Europe must comply with the general and flexible balance requirements of OMB Circular A-119 and Regulation 1025/2012; and those that wish to benefit from the liability protections of the SDOAA must do the same. Those that wish to be accredited by ANSI must adhere to the affirmative balancing obligations set forth in its *Essential Requirements*, and other, similarly affirmative obligations apply to NSBs representing their countries in ISO or IEC. Some SDOs, such as ASTM and DVB, impose strict numerical balancing mechanisms such as quotas on participation by different interest groups. The latest debates over SDO balance involves the processes for developing SDO IPR policies and whether balance should be sought between patent- and product-centric stakeholders. The antitrust implications of this dimension of SDO balance are subject to debates that are still in their early stages.