

THE TECHNOLOGY,
MEDIA AND
TELECOMMUNICATIONS
REVIEW

THIRTEENTH EDITION

Editor
Matthew T Murchison

THE LAWREVIEWS

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MEDIA AND
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This article was first published in December 2022
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Published in the United Kingdom

by Law Business Research Ltd

Holborn Gate, 330 High Holborn, London, WC1V 7QT, UK

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ISBN 978-1-80449-141-6

Printed in Great Britain by

Encompass Print Solutions, Derbyshire

Tel: 0844 2480 112

ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following for their assistance throughout the preparation of this book:

ANANTLAW

BAGUS ENRICO AND PARTNERS

BAKER MCKENZIE

ELVINGER HOSS PRUSSEN

KIM & CHANG

LATHAM & WATKINS LLP

LEE AND LI, ATTORNEYS-AT-LAW

MLL MEYERLUSTENBERGER LACHENAL FRORIEP AG

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TRAPLE KONARSKI PODRECKI & PARTNERS

URÍA MENÉNDEZ

WEBB HENDERSON

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PREFACE

This 13th edition of *The Technology, Media and Telecommunications Review* provides updated overviews of legal and policy constructs and developments in the TMT arena across 18 jurisdictions around the world. As in years past, our goal with this publication is to provide a practical, business-focused survey of these issues, along with insights into how regulatory activity in this arena continues to evolve.

Policymakers in 2022 have continued to grapple with the impact of the covid-19 pandemic, which has focussed greater attention on the need for ubiquitous broadband internet connectivity and has hastened efforts to make broadband services more widely available. The height of the pandemic saw a significant rise in remote working, distance learning, tele-health visits, and similar broadband-enabled activities. And while more businesses and schools are now returning to an in-person environment, it remains the case that work, education, and other aspects of our daily lives are more reliant on broadband connectivity today than before the pandemic.

These developments have spurred numerous initiatives around the world to improve and expand broadband connectivity for consumers going forward. Governments in various jurisdictions are in the midst of implementing subsidy programmes and other efforts to speed the deployment of advanced networks in unserved and underserved areas. Regulators have also taken steps to preserve internet access where it already exists, including by exploring mandates requiring certain rates for low-income consumers. Such initiatives have sparked notable legal challenges and policy debates over whether government intervention, market-based solutions, or some combination of the two can be most effective at ensuring widespread broadband availability.

Regulators also are wrestling with how best to fund these ever-growing programmes to promote broadband deployment and availability. Recent years have seen the use of various paradigms, including direct appropriations from the government and funds fed by mandatory contributions from telecommunications service providers and their customers. At the same time, some jurisdictions are looking to other funding mechanisms, such as potentially requiring large online platform providers and streaming video services, whose content makes up a significant portion of internet traffic, to bear some responsibility for contributing to the deployment of networks that carry that traffic.

The relationship between these online content providers and the broadband providers delivering their content also remains the subject of wider policy debates. There continue to be long-simmering questions about ‘net neutrality,’ including whether ‘zero-rating’ and other kinds of network management practices by broadband providers benefit or harm consumers and online content providers, and whether efforts to promote a healthy internet ecosystem are best served by light-touch, market-based regimes or by more intrusive government regulations.

In the past year, Europe has been at the forefront of developments on these issues, while policymakers in the United States have faced obstacles to their anticipated re-evaluation of the light-touch approach reinstated in 2018. Debates about ‘neutrality’ have also carried over to the content side, where social media companies are facing ongoing scrutiny over claims of discriminatory practices in moderating third-party content on their platforms. Indeed, some jurisdictions are considering measures that not only would rescind immunities these platforms have traditionally enjoyed for their content moderation practices, but also would require increased transparency and potentially even impose anti-discrimination mandates or other consumer protections.

In addition, governments around the world continue to take steps to harness new communications technologies. The era of 5G wireless services is now in full swing, and regulators are exploring ways to facilitate further deployment of these services. These efforts include actions to free up more radiofrequency spectrum for these services, by reallocating spectrum from one use to another, auctioning off wireless licences in bands newly designated for 5G, and adopting new spectrum sharing rules. Deployments of new satellite broadband systems, including large systems in low Earth orbit, also are underway, raising fresh questions about how best to ensure space safety and mitigate new sources of radiofrequency interference.

This edition’s chapters for each country describe these and other developments, including updates on media ownership, privacy and data security, and efforts to combat fraudulent robocalling and the ‘spoofing’ of caller identification information. Our contributing authors have done tremendous work in preparing these updated overviews of TMT issues in their respective jurisdictions, and I hope this latest edition of *The Technology, Media and Telecommunications Review* will be a helpful resource to readers interested in the legal and policy developments in this sector.

Matthew T Murchison

Latham & Watkins LLP

Washington, DC

November 2022

INDIA

*Rahul Goel and Anu Monga*¹

I OVERVIEW

The world is overflowing with data. Adoption of the internet, smart devices and cloud-driven apps, followed by increasing use of AI systems are the reason why we are generating and consuming data at a blazing speed. World governments have suggested ‘Open Data Initiatives’ and protocols related to personal data, like introducing General Data Protection Regulation (GDPR) in the European Union (EU) and the Personal Data Protection Bill (PDP Bill) in India.

With the rapid pace in the technology, the TMT sector in India has seen numerous developments. The year 2022 showed immense growth in the sector, wherein, India remained as the second-largest country in terms of internet subscription.

The Digital India programme launch by the Prime Minister of India, Narendra Modi with the vision to transform India into a digitally empowered society and knowledge economy achieved another milestone, which was highlighted in the vision of the government of India through various measures taken up for the growth of the TMT sector. The key areas in discussion in the programme are broadband highways, universal access to mobile connectivity, a public internet access programme, e-governance, electronic delivery of services, and electronics manufacturing.

The government of India, in its budget for the year 2022–23 highlighted that the required spectrum auctions will be conducted in 2022 to facilitate rollout of 5G mobile services within 2022–23 by private telecom providers, which was conducted in August 2022. In the Union Budget of 2022–23, the Cabinet allocated an amount of 845,870 million rupees to the Department of Telecommunications (DoT).²

In April 2022, the government of India launched the Digital India RISC-V programme (DIR-V), wherein, India will create microprocessors for India’s focus on mobility, computing and digitisation. The Centre for Development of Advanced Computing of Indian Institute of Technology (IIT), Madras in collaboration with MeitY has already developed two microprocessor, Vega (64 bit) and Shakti (32 bit) for open-source architecture.³

1 Rahul Goel and Anu Monga are partners at AnantLaw.

2 Union Budget 2022–23, Analysis of Expenditure by Ministries (February 2022), https://prsindia.org/files/budget/budget_parliament/2022/Union%20Budget%202022-23%20Analysis%20of%20Major%20Demands.pdf (last accessed: 18 October 2022).

3 Government Sets Timeline To Roll Out 1st Indigenous Commercial By 2023–2024 (April 2022), <https://www.outlookindia.com/business/government-sets-timeline-to-roll-out-1st-indigenous-commercial-by-2023-2024-news-193518> (last accessed: 18 October 2022).

Under the Policy on Open Standards for e-governance,⁴ the Department of Electronics and Information Technology (DeitY) has been assigned the responsibility for formulating standards for e-governance systems in India. All projects under e-governance (government to government (G2G), government to business (G2B), and government to citizen (G2C)) adhere to this policy.

The Indian over-the-top (OTT) market is actively scaling, with significant investment being made in both original and premium content, as well as robust subscription growth. With over 40 competitors, the Indian OTT market is one of the most competitive among growing markets. While there have been discussions about people turning away from TV, this has not yet occurred in India on a significant scale.

The covid-19 pandemic gave a massive benefit to the already-booming internet media and entertainment industry and transformed its growth trajectory in the previous year. The audience appreciated a more technologically advanced type of media that went beyond traditional media, which resulted in a widespread use of OTT platforms and an upsurge in both viewership and watch time.

When highlighting the actions, convictions, customs or opinions of any racial or religious group, OTT platforms are proceeding with necessary prudence and judgement. It will only be diligent that the government exercises its authority to censor OTT content judiciously and with consideration for fundamental liberties and due process. This will ensure that the concerns over process, sensitive information, offensive content, and so on do not pop up.

The courts in India have also played a crucial role in setting a touchstone in the TMT sector. To quote an example, recently, WhatsApp and Meta changed their privacy policy to allow the sharing of users' personal data with each other and the Competition Commission of India (CCI) ordered a probe into the said policy. The privacy policy of WhatsApp is also under challenge before the Supreme Court of India for violation of privacy laws and the Information Technology Act, 2000.

Industry bodies, stakeholders and citizen's interests in the sector were instrumental in changing the India government's outlook towards the telecom industry as they actively participated in the discussions with the government for bringing about impacting reforms. The policy changes included permitting consolidation of internet links, removing bank guarantee requirement of 10 million rupees from service areas, and logical sharing of the enterprise telephone system for domestic and international business. The decision to bring about these changes was with a view to optimise cost for better usage of IT infrastructure.

Development in the sector, specifically, technology, is also witnessed when, in its 2022 Budget, the Indian government announced levying 30 per cent tax and 1 per cent tax deducted at source on income accruing from cryptocurrencies. The Reserve Bank of India is also beginning to work on implementation of the digital rupee in a phased manner, as announced in the budget speech of 2022–23.⁵ It was announced that India will soon launch

4 Standards for e-governance, <https://www.meity.gov.in/content/standards-policies>.

5 No plan to exempt cryptocurrency transactions from taxes: Govt (20 July 2022), <https://www.financialexpress.com/blockchain/crypto-tax-news-no-plan-to-exempt-cryptocurrency-transactions-from-taxes-govt/2599925/> (last accessed: 23 September 2022).

the digital rupee and the digital currency issued by the Reserve Bank of India would be numbered in units, in a similar fashion to every fiat currency having a unique number. The said currency will then be included in the currency circulation.⁶

The day is not too far off, thanks to increasing digitisation efforts, when India will accept the latest technologies such as internet via satellite, data science, and so on. India's telecom journey has, without a doubt, moved forward from telegraph communication.

II REGULATION

i The regulators

Regulator for telecommunications

The regulatory body set up to oversee the telecom and broadcasting sector is the Telecom Regulatory Authority of India (TRAI) under the Telecom Regulatory Authority of India Act, 1997 (TRAI Act).

On the regulatory side, fixing and regulating tariffs for telecom and broadcasting services is one of TRAI's core functions. It is authorised to publish directions, orders and regulations covering a wide range of subjects including tariff, interconnection and quality of service as well as governance of the Authority. It also publishes consultation papers and issues recommendations to the DoT established under the Ministry of Electronics and Information Technology (MeitY).

The adjudicatory and disputes functions are taken up by the Telecom Disputes Settlement Appellate Tribunal (TDSAT), which was established in 2000 through an amendment in the TRAI Act. TDSAT, therefore, is the appellate authority and adjudicates all the disputes pertaining to the TRAI Act, tariff orders issued by TRAI, and inter-party telecom and broadcasting disputes.

The DoT was created with the intention of bringing safe, cost-effective, and quality-converged telecom services for swift and inclusive socio-economic growth of the nation. With regard to telegraphs, telephones, wireless, data, facsimile, telematics services, and other comparable kinds of communications, the DoT takes up tasks of policy creation, licencing and coordination.

It also provides financing for the advancement of research and study in telecommunications technology and for building a trained workforce for the telecom programme, including endorsing institutions, supporting scientific institutions and universities for advanced scientific study and research as well as granting scholarships in educational institutions and other financial aid to people including those studying abroad.

Regulator for wireless and radio broadband

In 1952, the DoT created the Wireless Planning and Coordination Wing (WPC). The WPC is India's national radio regulatory body, in charge of overseeing and issuing licences for spectrum frequencies. This wing works as an extension of the DoT by issuing permits for the establishment, upkeep and operation of wireless stations. The WPC's operations are roughly divided into three sections: licencing and regulation, establishing new technology group, and the Standing Advisory Committee on Radio Frequency Allocation (SACFA).

⁶ Speech of Union Minister Nirmala Sitharaman, Minister of Finance, https://www.indiabudget.gov.in/doc/Budget_Speech.pdf (last accessed: 18 October 2022).

The SACFA is essentially a high-level committee which includes heads of wireless users and administrative ministries of the government which recommends on issues relating to frequency allocation, clearance of wireless installation, including import of radio frequency devices, and issues related to the International Telecommunications Union and Asia Pacific Telecommunity. Moreover, for the installation or import of equipment for wireless transmission of radio frequency, the clearance and approval from both WPC and SACFA is mandatory.

Regulator for broadcasting services (media and entertainment sector)

For broadcasting services like cable television, direct-to-home (DTH), headend in the sky (HITS) and internet protocol TV (IPTV), the TRAI is the national regulatory authority. Its functions include releasing annual tariff rates for cable television services, enact interconnection (broadcasting) regulations to provide signals on a non-discriminatory basis to distributors, must-carry provisions mandating broadcasters to carry channels of national interest, etc.

However, there is also a complex web of actors that regulate this section such as the Ministry of Broadcasting (MIB) and self-regulatory bodies like the Broadcasting Content Complaints Council (BCCC) and the News Broadcasting Standards Authority (NBSA).

The primary function of the MIB is to regulate uplinking and downlinking permissions, content regulation, and overall governance of the same. It also releases advisories for television channels, resolves complaints received from viewers and issues penalties to broadcasters.

The contents of private satellite channels and networks of multi-system operators and local cable operators are monitored by the broadcasting wing of the MIB under the provisions of the Cable Television Networks (Regulation) Act, 1995 and policy guidelines issued therein. Similarly, the regulation of the film industry in India is monitored by the film division of the MIB under the Cinematograph Act, 1952.

Additionally, the Central Board of Film Certification (CBFC) regulates theatrical and non-theatrical films, its public exhibitions, its promotional and developmental activities, organising film events (in collaboration with other departments like the Ministry of Culture), etc. The CBFC not only grants content-based certification to films, but also certifies the same for export, and provides certification for the import of international films.

The self-regulating bodies like BCCC, NBSA, the Advertising Standards Council of India (ASCI) formulate guidelines, self-regulatory codes and regulations for industry players to follow.

ii Main sources of law

There are a number of legislations that deal with the telecommunication and broadcasting sector in India. Apart from the legislations, the regulators have also introduced a number of rules, policies, guidelines and regulations that govern the sector. The Telegraph Act, 1885 and the Indian Wireless Telegraphy Act, 1933 are some of the early legislations that govern telegraph and telecommunications in India.

The Telegraph Act⁷ deals with wired as well as wireless telegraphy, telephones, teletype, radio communications and digital data communications. Under the Act, the government

7 History of the Telegraph Act, <https://www.legacyias.com/indian-telegraph-act-1885/> (last accessed: 24 September 2022).

established, maintains, operates, licences and oversees all wire and wireless communications within India. The Wireless Telegraphy Act, on the other hand, provides for regulation of wireless telegraphy apparatus.

The Prasar Bharti (Broadcasting Corporation of India) Act, 1990 also governs broadcasting in India and provides for the establishment of the Broadcasting Corporation of India which regulated the matters connected therewith or incidental thereto.

The Cable TV Networks (Regulation) Act, 1995 regulates operations of cable television networks, broadcasting conditions for television channels, content of programmes and advertisements, etc. Further, the Cable Television Network Regulation Rules, 1994 also provides for programming and advertisement codes.

Apart from these legislations, the following policies and guidelines have been introduced to regulate the telecommunication and broadcasting sector:

- a* National Digital Communications Policy 2018 (NDCP 2018): The NDCP was adopted succeeding the National Telecom Policy of 2012, with an aim to develop next generation technologies and achieve strategic goals of ensuring digital sovereignty, providing broadband for all, creating jobs in the sector, and enhancing global value chain by India's contribution to international telecommunications, while also keeping the interests of the stakeholders in mind.⁸
- b* The Broadband Policy, 2004: The Policy is aimed at enhancing the quality of services and the growth of GDP by creating a technological infrastructure compatible with various technologies like optical fibre, digital subscriber lines on copper wire, cable TV network, satellite media, terrestrial wireless and any other future technology.
- c* Policy guidelines for uplinking and downlinking television channels: The guidelines were issued by the government in 2011 and mainly regulate private television channels. However, in April 2020, the government introduced new draft policy guidelines for uplinking and downlinking with the view to curb illegal broadcast of channels that do not have licences for a free dish. But the draft is still under consideration and the stakeholders' and inter-ministerial consultations have been conducted.

iii Regulated activities

In the telecom sector, the regulated activities include services like access service, data service, internet service, spectrum use, radio trunking service, VSAT, GMPSC service, etc. In the broadcasting sector, these services include operating satellites, uplinking and downlinking of channels, content regulation and registration of channels, etc.

The regulators in the telecom and broadcasting sector majorly regulate all activities related to service in the sector. These services were, for the first time, brought under the ambit of unified license (UL) per the Telecom Policy, 2012 with the motto, 'one nation – one licence'. In simpler terms, the Policy aimed at simplifying the procedure to obtain licences for different telecom services and recommended a unified licence for all service areas.⁹ The UL covers the following areas:

- a* access services;
- b* internet service (all-India jurisdiction);
- c* internet service (jurisdiction in specific service area);

8 National Digital Communications Policy – 2018, https://dot.gov.in/sites/default/files/Final%20NDCP-2018_0.pdf.

9 Recommendations on Unified Licensing, <https://traif.gov.in/sites/default/files/Recomodifiedfinal.pdf>.

- d* internet service (jurisdiction in a secondary switching area);
- e* national long distance service;
- f* international long distance service;
- g* global mobile personal communication by satellite service;
- h* public mobile radio trunking service;
- i* very small aperture terminal closed user group service;
- j* audio conferencing, audiotext and voice mail services;
- k* machine to machine (all India jurisdiction and service area jurisdiction);
- l* the Indian national satellite system mobile satellite system reporting service; and
- m* resale of international private leased circuit service.¹⁰

Guidelines for granting a UL dated 17 January 2022¹¹ provide guidelines for granting a UL whereby the applicant must be an Indian company and meet eligibility conditions, and the grant would be subject to fulfilment of all requisites under the application (provided in Annexure II of the guidelines). The licence is issued for a period of 20 years and then can be further renewed for a period of 10 years.

iv Ownership and market access restrictions

For a UL authorisation, application to the DoT is made, after which the process of granting the licence begins. The licence is an agreement between the government and the licensee (i.e., the company looking to acquire the licence). Such licence is acquired only when the company duly files all the requisite documents, complies with the terms and conditions, and completes the financial obligations, as prescribed in the UL Agreement.¹²

The unified licence allows a company to apply for more than one service area in a single licence. Unified license and authorisation under UL is issued on a non-exclusive basis (i.e., without any restriction on the number of entrants for provision of any service in a service area). One company can have only one UL.

This application must be subject to fulfilment of all the conditions of entry simultaneously or separately at different time. The tenure of the authorisation will run concurrently with the unified license.¹³ Apart from these terms prescribed in the Agreement, the licensee must also comply with the applicable laws in the sector.

In terms of the extant policy governing foreign direct investment (FDI) (see Press Note No. 4 (2021 series)¹⁴), 100 per cent FDI is permitted in the telecom sector in all service areas. No prior approval is required from the government of India for making an investment in a company holding any telecom licence.

However, if the investors or foreign company has operations in a country sharing a land border with India, then a prior approval (before making any investment or acquiring shares in an Indian company holding any telecom licence) from the DoT shall be required.

10 Unified License, DoT, available at <https://dot.gov.in/unified-license>.

11 Guidelines for Access Services Licences, <https://dot.gov.in/access-services/guidelines-for-access-services-licences>.

12 Licence Agreement for Unified Licence dated 17 January 2022, <https://dot.gov.in/sites/default/files/Authentication%20and%20Maintenance.pdf?download=1>.

13 DoT Guidelines for granting of Unified Licence, https://dot.gov.in/sites/default/files/2016_03_28%20ULG%20AS-I.pdf.

14 FDI in the Telecommunications Sector, <https://dpiit.gov.in/sites/default/files/pn4-2021.PDF>.

v Transfers of control and assignments

In India, the scheme of compromise, arrangement and amalgamation of companies is governed by the Companies Act, 2013, and every such scheme is confirmed by National Company Law Tribunal constituted in the Act. Thereby, whenever a scheme is introduced before the tribunal wherein the UL is granted to companies, the tribunal ensures that the entity to whom that licence would be transferred is eligible to acquire the authorisation or licence in terms of the extant guidelines.

The licence imposes restrictions on the transfer of a licence, under Article 6, to a third party without the consent of the DoT. Additionally, the DoT has also issued guidelines for transfers and mergers of various categories of telecommunication service licences and authorisation.¹⁵ These guidelines are issued considering the TRAI's recommendation dated 11 May 2010 and 3 November 2011, along with the National Telecom Policy, 2012. The guidelines ensure free and fair market competition and, therefore, allow only intra-service area mergers.

The guidelines provide that the licensee must notify the government while filing the scheme before the tribunal and only upon the approval by the DoT within 30 days of receipt of the notice can the scheme be approved.¹⁶ Moreover, subsequent to the approval of this scheme, the time period will be allowed to be one year for various licence service areas. In cases when the licensee participates and proposes to merge into another licensee, the lock-in, in such case, would apply in respect to new shares issued to the resultant company.

As per the guidelines, in addition to being surrendered, the spectrum may also be traded.¹⁷ However, all mergers would be subject to a spectrum cap of 25 per cent of the total spectrum assigned in a particular service area, as well as a cap of 50 per cent in a given band in the respective service area. Any such scheme will only be permitted when market share for access service of the resultant entity in a service area is up to 50 per cent. On exceeding this limit, the entity will have to reduce its resultant market share and bring it equivalent to the required per cent within the specified period of one year.

In 2018, the guidelines were amended and now allow the trading and surrender of this access spectrum, when it exceeds the prescribed limit, within one year of permission granted by the department. If any company fails to comply with the same, it shall be open to action.¹⁸

To give an example, the merger of Vodafone India with Idea Cellular resulting in the formation of Vodafone-India (Vi) was one of the most discussed mergers in the telecom sector in 2018. This merger created India's largest telecom company with 408 million active subscribers and 32.2 per cent revenue market share.¹⁹ However, in the spectrum holding

15 Guidelines for transfer or merger of various categories of telecommunication service licences or authorisation under a UL on compromises, arrangements and amalgamation of the companies, https://dot.gov.in/sites/default/files/DOC200214_0.pdf.

16 Amendment in the guidelines for transfer or merger of various categories of telecommunication service licences or authorisation under a UL on compromises, arrangements and amalgamation of the companies dated 24 September 2018, https://dot.gov.in/sites/default/files/2018_09_26%20AS%20T%26M.pdf?download=1.

17 *ibid.*

18 *ibid.*

19 'Idea-Vodafone say merger complete, now India's largest telco with 408 million active users' (21 August 2018), <https://m.economictimes.com/industry/telecom/telecom-news/idea-vodafone-say-merger-complete-now-indias-largest-telco-with-408-million-active-users/articleshow/65619297.cms> (last accessed: 20 September 2022).

cap, the combined entity was shooting over 25 per cent in Gujarat, Kerala, Maharashtra, Madhya Pradesh and western Uttar Pradesh. The merger was in controversy as it resulted in leaving only three players in the telecom industry, namely Vi, Reliance Jio and Bharti Airtel; however, it was approved by the DoT because the companies complied with the guidelines and surrendered the excess spectrum cap. Additionally, the Supreme Court's order to them to pay adjusted gross revenue also required that the two companies consolidate and satisfy the obligations.²⁰

Along the same lines, see the order of the MIB, dated 30 December 2020, the Guidelines for obtaining a licence for providing a DTH broadcasting service in India provides that any vertically integrated entity would not reserve more than 15 per cent of operational channel capacity for its operator and they are under an obligation to offer the rest of the capacity to other broadcasters on a non-discriminatory basis.²¹

The CCI is another regulator for all transactions having appreciable adverse impact on competition in the market in India. It regulates the mergers of companies meeting the asset and turnover threshold prescribed in the Competition Act, 2002.

On 23 October 2019, the government of India approved the revival plan of BSNL and MTNL, inter alia, approval for their merger because of high debts. When, in 2019, the companies were given a relief package of around 700 billion rupees, MTNL and BSNL were expected to turn profitable by 2020–21 and 2023–24, respectively. However, on 6 April 2022, the government deferred the merger because of financial reasons and the huge debts of MTNL.²²

III TELECOMMUNICATIONS AND INTERNET ACCESS

i Internet and internet protocol regulation

Internet protocol licensing, in India, is regulated by the DoT through UL under service areas, namely, UL-internet service provider (UL-ISP) under Internet Service (Category-A with all-India jurisdiction), Internet Service (Category-B with all jurisdiction in a service area), and Internet Service (Category-C with jurisdiction in a secondary switching area), along with UL-virtual network operator (UL-VNO) licences.

Under the UL-ISP, the licensee is authorised to provide internet access, including IPTV, internet telephony through public internet by the use of personal computers (PC) or IP-based customer premises equipment (CPE), unified messaging service, etc. The service provider is required to comply with all the conditions in the UL.

Similarly, VNOs are treated as an extension of network service operators (NSO) or telecom service providers (TSPs). Under the UL-VNO guidelines, the authorisation under

20 'Supreme Court tells telecom companies to pay dues in 3 months; Government mulls relief' (26 October 2019), https://economictimes.indiatimes.com/industry/telecom/telecom-news/supreme-court-tells-telecom-companies-to-pay-dues-in-3-months-government-mulls-relief/articleshow/71768993.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst (last accessed: 20 September 2022).

21 Guidelines for obtaining license for providing direct-to-home (DTH) broadcasting service in India, <https://mib.gov.in/sites/default/files/Amendment%20in%20Guidelines%20for%20obtaining%20license%20for%20providing%20DTH%20Broadcasting%20Services%20in%20India.pdf>.

22 'BSNL-MTNL merger deferred because of financial reasons: Govt tells Parliament' (6 April 2022), <https://www.businesstoday.in/industry/telecom/story/bsnl-mtnl-merger-deferred-due-to-financial-reasons-govt-tells-parliament-328865-2022-04-06> (last accessed: 20 September 2022).

UL-VNO is issued on a non-exclusive basis (i.e., without any restriction on the number of entrants for provision of any service in a service area). Moreover, the licence can only be granted to an Indian company, partnership firms or organisations established under the Shops and Establishment Act.²³

The internet protocol currently used in India is IPv4, which is more than 30 years old. The wide use of internet, broadband, increase in subscribers and deployment of next generation network technology has led to increased consumption of IP addresses, resulting in delay and latches in network and exhaustion of IPv4 addresses. Therefore, DoT is planning to bring IPv6, which is the latest version of the protocol predominately used today.

The IPv6 was even recognised in the National Telecom Policy, 2012, in its preamble and objectives. The policy document for IPv6 was released by DoT in March 2013 to be implemented in India in a phased manner and in accordance with the NTP-2012.²⁴ The latest revision of the implementation timeline, dated 2 November 2021 provides that the necessary action must be undertaken by all organisations to be IPv6 transaction-ready by 31 December 2022.²⁵

In the updated licence terms, the DoT has reinforced compliance with the security conditions, as provided in the UL. The ISPs must also maintain commercial records, call detail records, exchange detail records and IP detail records with regard to the communications exchanged on their network for at least a period of one year.²⁶

ii Universal service

Under the New Telecom Policy, 1999, universal service was provided as one of the main objectives, wherein universal service was aimed to be given to all uncovered areas. In light of the same, the Universal Service Support Policy dated 1 April 2002 was introduced. The guidelines for the same were issued on 27 March 2002.

The Indian Telegraph Act was amended in 2003 (see the Indian Telegraph (Amendment) Act, 2003) wherein the Universal Service Obligation Fund (USOF) was given a statutory recognition under Section 9A.²⁷ Section 9B and 9C of the Act provide for crediting of sum to the consolidated fund and grants and loans by the government. Section 9D provides for administration and utilisation of the fund, wherein it states that the fund shall be utilised exclusively for meeting the Universal Service Obligation.

23 Guidelines for Grant of VNO Licenses, DoT, https://dot.gov.in/sites/default/files/2018_08_31%20UL%20VNO%20G.pdf?download=1.

24 National IPv6 Deployment Roadmap Version-II, https://dot.gov.in/sites/default/files/2016_11_18%20IPv6%20NT.pdf.

25 DoT Notification on Revision of IPv6 Transition Timeline, <https://dot.gov.in/sites/default/files/Revision%20in%20IPv6%20Transition%20timelines.pdf>.

26 Licence Agreement for Unified Licence dated 17 January 2022, <https://dot.gov.in/sites/default/files/Authentication%20and%20Maintenance.pdf?download=1>.

27 Section 9A of the Indian Telegraph Act, 1885, https://www.indiacode.nic.in/bitstream/123456789/2307/1/a1885__13.pdf.

The resources for meeting the obligation are raised through the universal service levy, which is collected from service providers by raising a percentage of revenue earned by them under various licences. At present, the levy percentage is 5 per cent.²⁸ Thereafter, the allocation is done through parliamentary approval.²⁹

On 9 December 2020, 20.29 billion rupees were released from USOF to provide mobile coverage to 1,683 locations in Arunachal Pradesh and 691 locations in two districts of Assam.³⁰ The DoT has also executed a project which provides for mobile services in 2,199 locations affected by left-wing extremists in Bihar, Chhattisgarh, Jharkhand, Maharashtra, Madhya Pradesh, Odisha, Telangana, Uttar Pradesh and West Bengal.³¹

In the 2022–23 Budget it was announced that 5 per cent of the annual collection under USOF will be allocated to enable affordable broadband and mobile services in remoter areas.³² Moreover, for better communication facilities and digital resources, the Union Budget announced a public–private partnership and awarded contracts for laying optical fibre in all villages through the Bharatnet project, completion of which is expected in 2025.³³

On 1 July 2022, the DoT signed an agreement with Indian telephone Industries (ITI) Limited and BSNL with an aim to fund the pilot projects E-band, LTE indigenous technologies including integration of 4G/5G prototypes with C-DoT core. The USOF would be funding four pilot projects each of around 100 million rupees enabling the development of these technologies.³⁴

iii Restrictions on the provision of service

TRAI is empowered to regulate charges for interconnection, termination and channel subscription. The Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 and tariff orders provides for obligations of broadcasters, television channels, and service providers along with reference connection offers, as provided by TRAI.

Thereby, on 9 March 1999, the Authority issued the Telecom Tariff Order, 1999 which allowed the consumers to choose the channels they wish to watch and pay only for them at

28 Section 18.2, Licence Agreement for Unified Licence dated 17 January 2022, <https://dot.gov.in/sites/default/files/Authentication%20and%20Maintenance.pdf?download=1>.

29 Section 9B of the Indian Telegraph Act, 1885, https://www.indiacode.nic.in/bitstream/123456789/2307/1/a1885__13.pdf.

30 ‘Cabinet approves Universal Service Obligation Fund Scheme for providing Mobile Coverage in Arunachal Pradesh and two Districts of Assam under the Comprehensive Telecom Development Plan for North Eastern Region’ (9 December 2020), <https://pib.gov.in/PressReleasePage.aspx?PRID=1679338>.

31 Telecom at a Glance, <https://dot.gov.in/sites/default/files/Telecom%20at%20a%20Glance-2019.pdf?download=1>.

32 ‘5 per cent of collections under USO Fund to be allocated for rural connectivity’ (1 February 2022), <https://www.thehindubusinessline.com/info-tech/5-per-cent-of-collections-under-uso-fund-to-be-allocated-for-rural-connectivity/article64961109.ece> (last accessed: 21 September 2022).

33 ‘Design-Led Manufacturing Scheme Proposed By Budget-2022-23 To Build A Strong Ecosystem For 5G’, <https://pib.gov.in/PressReleasePage.aspx?PRID=1794158>.

34 ‘Department of Telecommunications signs agreement with ITI Limited and BSNL to fund pilot projects under Universal Service Obligation Fund (USOF)’, <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1838558>.

maximum retail prices set by broadcasters, instead of the pre-set bouquets, as offered earlier. However, when the same was implemented, it, in turn, increased the cost for users because the cost of like-to-like channel options went up.

To bring down the cost of entertainment for the end consumer, TRAI announced amendments to the New Tariff Order on 1 January 2020. In the new amendment, TRAI imposed ceilings on prices of channels, bouquets and discounts, and reduced the cap on the maximum retail price of individual channels, which can form part of any bouquet, to 12 rupees from 19 rupees per month, which broadcasters said had not been backed by any logical rationale or consumer insight.

However, the Broadcast Associations challenged the same in the Bombay High Court³⁵ and Supreme Court³⁶ (however, the petition was later withdrawn on 15 February 2022). After no interim relief was granted by the Supreme Court and withdrawal of the petition, the broadcasters were ordered to comply with the New Regulatory Framework 2020 and submitted their Reference Interconnect Offer (RIO) to TRAI.

To address the issues identified by the stakeholders' committee, which held discussions on 23 December 2021, the Authority issued the consultation paper for seeking stakeholders' comments on points and issues which are pending for full implementation of the New Regulatory Framework.³⁷

Interconnection is another commercial and technical arrangement between the service providers, wherein they facilitate connection between their equipment, services and networks, which enables better connectivity to consumers. For regulations relating to interconnection, Section 11(b) of the TRAI Act³⁸ provides that the TRAI has the following functions, namely:

- a* fixing terms and conditions of interconnectivity between the service providers;
- b* ensuring technical compatibility and effective interconnection between different service providers; and
- c* regulating arrangement among service providers of sharing their revenue derived from providing telecommunication services.

Recently, in the case of *CCI v. Bharti Airtel Ltd.*,³⁹ the issue relating to interconnection was discussed when Reliance Jio requested the other service providers – namely, Bharti Airtel Limited, Vodafone India Limited and Idea Cellular Limited – to augment the point of interconnection for access, international long-distance, and national long distance services but the request was ignored by them. When Reliance Jio informed TRAI of the same, the Authority issued them with a show-cause notice for violation of Quality of Service of Basic Telephone Service (wireline) and Cellular Telephone Service Regulations, 2009⁴⁰ and Clause 27.4 of Part I of the Unified License. At the same time, an information order was also filed in the Competition Commission of India that the three service providers have

35 *The Film and Television Producers Guild of India Ltd. v. The Union of India*, WP (L) 116 of 2020.

36 *Indian Broadcasting and Digital Foundation v. Telecom Regulatory Authority of India*, SLP(C) 10801/2021.

37 Consultation Paper on Issues Related To New Regulatory Framework For Broadcasting And Cable Services, dated 7 May 2022, available at: https://www.trai.gov.in/sites/default/files/CP_07052022.pdf.

38 Sections 11(b)(ii), 11(b)(iii) and 11(b)(iv) of the Telecommunication Regulatory Authority of India Act, 1997, available at: https://tra.gov.in/sites/default/files/The_TRAI_Act_1997.pdf.

39 *Competition Commission of India v. Bharti Airtel Limited and Ors.* (2019) 2 SCC 521.

40 Quality of Service of Basic Telephone Service (wireline) and Cellular Telephone Service Regulations, 2009, <https://www.trai.gov.in/sites/default/files/201211091141353328813Regulation20mar09.pdf>.

an anticompetitive agreement causing appreciable adverse effects on competition in the telecommunication industry. As a cumulative penalty, the Department of Telecommunication imposed a 30.5 billion rupee fine on the service providers.

As far as statutory restrictions on sending of electronic direct messages are concerned, the Telecom Commercial Communications Customer Preference Regulations, 2018⁴¹ have been issued by TRAI which regulates unsolicited commercial communication. The Regulations provide for a wide range of customer preference using distributed ledger technology, cloud-based solutions for handling consumer grievance, registration of senders, headers (which is a unique ID assigned to each telemarketer), and complete control over the consent of subscribers to allow or disallow telemarketers to send unsolicited phone calls and texts.

iv Privacy and data security

On 27 June 2022, Razorpay, a Bengaluru-based payment gateway was compelled to supply its customer data in a police investigation against Alt News' co-founders who were allegedly receiving money from Pakistan, Australia, Singapore, Syria and UAE through the platform. This raised a critical privacy law issue as Razorpay users raised a concern that this action would leave them vulnerable to harassment as there was no safeguard against their misuse.⁴²

This was similar to the case last year when Alibaba Group Holding Ltd's cloud business in India got into serious trouble. A first information report (FIR) for alleged cheating under the IT Act had been registered against Alibaba for hosting a fraudulent website and when it did not respond to the data demands of the police team investigating in the matter, its bank account was frozen.⁴³

For these companies, the only resolution is the data protection law, which provides them with relief in cases of unlawful demands by the authorities. In India, the data protection law has already been half a decade in the making but of no avail. Back in 2017, India was all set to introduce data protection laws and in July 2017, a panel was constituted under Justice BN Srikrishna (former Supreme Court judge) to frame data protection norms. In August 2017, the Supreme Court of India held a right to privacy as one of the fundamental rights in the case of *Justice Puttaswamy v. Union of India*.⁴⁴

Later, in 2018, the Data Protection Bill, 2018 (PDP Bill 2018) was introduced in the parliament which gave the government unencumbered access to citizens' personal data. This was followed by the Privacy Data Protection (Amendment) Bill, 2019 (PDP Bill 2019), which brought about some key changes in the data privacy regime in India.

However, in August 2022, the Union Minister for Information Technology withdrew the Bill stating that the Ministry will come up with a comprehensive legal framework which will be suitable to the comprehensive legal framework. This is concerning that in a country

41 The Telecom Commercial Communications Customer Preference Regulations, 2018, <https://traai.gov.in/sites/default/files/RegulationUcc19072018.pdf>.

42 'How data privacy, Razorpay became victims of Alt News vs Delhi Police fight' (12 July 2022) https://www.business-standard.com/article/current-affairs/how-data-privacy-razorpay-became-victims-of-alt-news-vs-delhi-police-fight-122071200115_1.html (last accessed: 24 September 2022).

43 Relief For Alibaba: HC Directs Govt to Defreeze Ecommerce Giant's Bank Accounts (5 April 2022) <https://inc42.com/buzz/relief-for-alibaba-hc-directs-govt-to-defreeze-ecommerce-giants-bank-accounts/> (last accessed: 1 September 2022).

44 (2017) 10 SCC 1.

where the government manages the world's largest repository of biometric information and uses it to distribute almost US\$300 billion worth benefits to its voters,⁴⁵ there is no data protection law to safeguard them in case of risks and vulnerability.

Currently, data protection and privacy is governed by the Information Technology Act, 2000 (IT Act) and relevant rules framed under the IT Act, that is:

- a* the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules 2011⁴⁶ (SPD Rules);
- b* the Information Technology (Information Security Practices and Procedures for Protected System) Rules 2018⁴⁷ (Protected System Rules); and
- c* the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021⁴⁸ (Intermediaries Guidelines).

The SPDI Rules protect sensitive personal data of individuals and are applicable to body corporates or persons located within India. The Protected System Rules provide details of infrastructure requirements to be implemented by organisations that have protected systems for highly sensitive data or data collection centres. The Intermediary Rules provide a due diligence framework to be observed by an intermediary while discharging its duties.

Along with these statutes, in cases of crimes in cyberspace, reference from the Indian Penal Code, 1860 is also taken wherein the punishment for defamation, criminal intimidation, cheating, etc., are provided.

Additionally, under the IT Act, the Information Technology (The Indian Computer Emergency Response Team and Manner of Performing Functions and Duties) Rules 2013⁴⁹ (CERT Rules) are framed, which establishes that the Indian Computer Emergency Response Team (CERT-In) is a national nodal agency responsible to respond to cyber security incidents. MeitY has also introduced directions relating to information security practices, procedure, prevention, response and reporting of cyber incidents for the Safe and Trusted Internet⁵⁰ wherein organisations' cyber incidents occurring within their systems or when they notice any such incident have to mandatorily report the same to CERT-In.

The world is witnessing a data revolution right now. It would not be wrong to say that almost every single activity undertaken by an individual involves at least some element of data transaction. With this development, the internet has brought new markets in the world. To quote as an example, Amazon is the world's largest retailer which has no inventory, Uber is the world's largest taxi company with no taxi, and Airbnb is the world's largest accommodation provider that has no real estate of its own.

45 'Is India at risk of Chinese-style surveillance capitalism?' (9 August 2022), <https://www.deccanherald.com/opinion/is-india-at-risk-of-chinese-style-surveillance-capitalism-1134570.html> (last accessed: 9 September 2022).

46 SPD Rules, https://www.meity.gov.in/writereaddata/files/GSR313E_10511%281%29_0.pdf.

47 Protected System Rules, <https://www.meity.gov.in/writereaddata/files/NCIIPC-Rules-notification.pdf>.

48 The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, https://www.meity.gov.in/writereaddata/files/Intermediary_Guidelines_and_Digital_Media_Ethics_Code_Rules-2021.pdf.

49 CERT Rules, [https://www.cert-in.org.in/PDF/G.S.R_20\(E\).pdf](https://www.cert-in.org.in/PDF/G.S.R_20(E).pdf).

50 Directions relating to information security practices, procedure, prevention, response and reporting of cyber incidents for Safe & Trusted Internet, https://www.cert-in.org.in/PDF/CERT-In_Directions_70B_28.04.2022.pdf.

With users being vulnerable from the data that they share with these platforms, they must be assured that the sharing of data is secure and it is the duty of the government to make sure that their citizens are not vulnerable. However, recurring cyber-threats, data breaches and data leaks have cautioned both the governments and the citizens.

On 19 July 2022, the Ministry of Home Affairs informed the Parliament that there have been 6,74,021 cyber security incidents as of June 2022. On 2 August 2022, the government informed the parliament that between June 2018 and March 2022, Indian banks reported almost 248 data breaches by hackers, most of which were relating to accruing users' card details along with the theft of business and non-business information.⁵¹ An IBM Report stated that data breaches, in India, cost an average of 176 million rupees in 2022, resulting in an increase of cost by 6.6 per cent from last year when the average cost was 165 million rupees.⁵²

Therefore, with increasing threats to security of personal data, it is important that the government does not leave such a critical issue unregulated and formulates legislation to safeguard citizens' privacy and enforce data security measures taken up by organisations.

IV SPECTRUM POLICY

i Development

The frequency and spectrum management in India is within the control of the WPC under the Ministry of Communications. It is responsible for licensing regulation relating to spectrum in India. The SACFA is a committee whose operation is to recommend on major frequency allocations issues, formulating frequency action plans, recommending on issues referred to it by wireless users, and providing clearance of wireless installations, among others.

In India, the National Digital Communication Policy of 2018 recognised that 'spectrum' is a key natural resource of a country and therefore must be used only for public benefit while also achieving India's socio-economic goals. Therefore, it lists numerous strategies that ensure transparency in allocation of spectrum while also optimising its availability. In a similar fashion, TRAI also makes recommendations through its consultation paper on spectrum allocation, usage and pricing.

Initially, the allocation of spectrum was done through bundling up a band of spectrum along with a franchise licence for a service. All additional assignments were at the discretion of the DoT and the allotment was on a case-by-case basis. The first ever spectrum licence in India was auctioned in 1994, when TRAI made recommendations on the same. To simplify the process, the government came up with a scheme in which the Indian territory was divided into 23 telecom circles. To be eligible to participate in the auction, a bidder must satisfy conditions provided by the government.

51 'Indian banks reported 248 data breaches in last four years, says government' (2 August 2022), <https://www.moneycontrol.com/news/business/banks/indian-banks-reported-248-data-breaches-in-last-four-years-says-government-8940891.html> (last accessed: 24 September 2022).

52 'Cost for data breaches averaged Rs 17.6 cr in 2022, highest ever: IBM study' (27 July 2022), https://www.business-standard.com/article/companies/cost-for-data-breaches-averaged-rs-17-6-cr-in-2022-highest-ever-ibm-study-122072701127_1.html#:~:text=Data%20breaches%20cost%20Indian%20businesses,breach%20was%20Rs%2016.5%20crore (last accessed: 24 September 2022).

However, there have been uncountable controversies on the allocation of spectrum. To quote some examples, there is the 2G spectrum scam of 2008, wherein the Telecom minister issued the 2G spectrum licence in the 2001 rates, as opposed to 2008 rates, causing the government a loss of approximately 1,760 billion rupees.⁵³

A similar case was when four former Indian Space Research Organisation scientists were blacklisted in the Antrix-Devas deal, wherein the S-band spectrum, to be utilised for satellite phones was sold at a lower price, without informing the space commission and remained unutilised for years. In 2009, the S-band, with the frequency of 2.3GHz was forcefully sold to BSNL and MTNL, which was surrendered by them, causing a loss of approximately 80 billion rupees. It was challenged in the Supreme Court, wherein the entire auction was held to be arbitrary, unconstitutional and at the expense of taxpayers' money.⁵⁴

As a result, TRAI introduced Guidelines on Trading of Access Spectrum by Access Service Providers⁵⁵ which provided for allowing the licensees to trade their exclusively assigned spectrum usage rights to any unlicensed parties that qualify the preconditions, with an aim to efficiently use the spectrum.

Currently, deployment of Fifth Generation (5G) mobile communication technology is setting a stage for next generation spectrum management. These new arrangements are an effective way to satisfy upcoming connectivity needs. The new regimes aim at facilitating access to additional spectrum, which would be necessary to meet the mobile data traffic.

On 30 November 2021, TRAI released a consultation paper on Auction of Spectrum for IMT/5G.⁵⁶ On 11 April 2022, it published a recommendation on Auction of Spectrum for IMT/5G.⁵⁷

In June 2022, the DoT issued a notice inviting applications for auction of 5G spectrum. In August 2022, after almost 40 rounds in over seven days, the spectrum was sold with the spend of approximately 1,501.73 billion rupees. As reported, this auction has turned out to be the biggest auction. The top bidder, Reliance Jio has invested the maximum earnest amount of about 880.78 billion rupees followed by Bharti Airtel with 430.84 billion rupees.⁵⁸

ii Flexible spectrum use

For commercial mobile services, radio spectrum is scarce and countries around the world have realised it. They recognise the necessity of utilising it efficiently and therefore, their regulatory and policy approach towards spectrum management is quite flexible. Scientists have been focusing on development of technology which can make standardisation activities for large-scale deployment possible.

53 'A 1.76 lakh crore scam — just notional?' (29 December 2017), <https://www.thehindu.com/opinion/a-176-lakh-crore-scam-just-notional/article22320817.ece> (last accessed: 9 September 2022).

54 Writ Petition (Civil) No. 423/ 2010 and 10/ 2010.

55 Guidelines for trading of access spectrum by access service providers, https://dot.gov.in/sites/default/files/2015_10_13%20Trading-WPC_0.pdf?download=1 (last accessed: 19 September 2022).

56 Consultation Paper on 'Auction of Spectrum in frequency bands identified for IMT/5G', dated 30 November 2021, https://www.trai.gov.in/sites/default/files/CP_30112021.pdf.

57 Recommendations on Auction of Spectrum in frequency bands identified for IMT/5G, dated 11 April 2022, https://www.trai.gov.in/sites/default/files/Recommendations_11042022.pdf.

58 '5G Spectrum auction ends, Govt earns over Rs 1.5 lakh cr; Reliance Jio top bidder', 2 August 2022, <https://indianexpress.com/article/business/india-concludes-19-blm-5g-spectrum-auction-8064216/>

In India, TRAI published its Recommendations on Allotment of Spectrum to Indian Railways for Public Safety and Security Services in October 2019.⁵⁹ The recommendations analysed the proposal of installation of a high-speed long-term communication corridor for monitoring services, passenger system displays and live feed of video surveillance of coached trains.

Moreover, the Authority also recommended that the spectrum must be assigned on an administrative basis, not to be used for commercial services, like WiFi on-board and for captive use only. Further, the charges for spectrum must be levied on a formula basis, as prescribed by the DoT for license fee and royalty for captive use.

On 9 June 2021, the MIB announced that the government allocated 5MHz spectrum in a 700MHz band for Indian Railways and 250 billion rupees would be spent in the next five years for signal modernisation and 5G spectrum implementation in Indian Railways.⁶⁰

iii Broadband and next-generation services spectrum use

Next-generation broadband networks and their deployment is one of the key issues for discussion in the telecom sector, as they drive economies of countries. These next-generation networks raise the standard of living, boost the internet of things, deliver advances in sectors like healthcare, education, e-commerce, public security and create employment opportunities. The small-cell, 5G and long-term evolution (LTE) are also a crucial information and communication technology infrastructure, as radio technologies are evolving, resulting in placing new demands on a country's need to set a uniform deployment in all circles.

In India, the 5G spectrum auction was one of the biggest steps towards upgrading the telecom sector and a way to catch up with China, South Korea and the United States. The auction earned a revenue to the government by realising only 35 per cent of the reserved price, which was more than was expected of it. It is an accepted practice that auctions generate revenues utilised for social welfare by the government. Therefore, this 5G auction is foreseen to have the potential to create a new age for business, generate revenue to enterprises, while also creating employment opportunities in the country.

iv Spectrum auctions and fees

Typically, there are two models of spectrum auction adopted by different countries: simultaneous multiple round auction (SMRA) and combined clock auction (CCA). India has adopted a hybrid approach, which is SMRA with clock auction. In other words, the auction has two stages – a generic stage, wherein every slot is auctioned and treated as equivalent, without frequency location information, and then the frequency identification stage.

59 Recommendations on Allotment of Spectrum to Indian Railways for Public Safety and Security Services (25 October 2019), https://www.trai.gov.in/sites/default/files/Recommendations_25102019.pdf.

60 'Cabinet allocates 5MHz spectrum for Indian Railways to improve communication and signalling' (9 June 2021), <https://www.livemint.com/news/india/cabinet-allocates-4g-spectrum-for-indian-railways-11623231538435.html> (last accessed: 20 September 2022).

In a spectrum licence, typically, there are three fees – entry fees, annual licence fees and allocation fees.⁶¹ During the auction, the DoT sets a reserve price, which is the minimum price at which the spectrum can be licensed.⁶²

However, the government scrapped the spectrum usage charges (SUC) for spectrums acquired through auctions held after 15 September 2021, which typically was approximately 3 per cent of the adjusted gross revenue of the operators, and the decision was taken considering the most awaited demand for the 5G auction.⁶³ This floor price was set in 2006 with an aim to safeguard the government revenues and lowered to 3 per cent to provide encouragement to the companies to participate in the auction.

The adjusted gross revenue (AGR) dues created a burden on these telecom companies, wherein, even after providing a 4-year moratorium to the operators, the telecom relief package seemed burdensome to the companies. Therefore, the government also decided to remove the SUCs on airwaves acquired in future auctions. Moreover, the requirement to submit a financial bank guarantee, which was equivalent to one annual instalment is also removed by the government.

Moreover, the government has also set a roll to provide opportunities to enterprises for building captive private 5G networks and issued guidelines for the same, allowing companies to apply for a renewable licence for 10 years against a non-refundable fee of 50,000 rupees from the DoT. The Guidelines also provides that the entities applying for the spectrum must have a minimum net worth of 1 billion rupees and must be an occupant of the geographical area on which it intends to establish the captive network.⁶⁴

V MEDIA

i Regulation of media distribution generally

India is the fifth largest media and entertainment sector in the world. The market size of the Indian broadcasting industry, in fiscal year 2020, was over US\$5.16 billion, which is estimated to reach over US\$8.85 billion by 2024.⁶⁵ As per the data released by the TRAI

61 Licensing Framework for Telecom: A Historical Overview, <https://cis-india.org/telecom/resources/licensing-framework-for-telecom> (last accessed: 19 September 2022).

62 Spectrum Pricing, https://www.gsma.com/spectrum/wp-content/uploads/2018/12/spectrum_pricing_positioning_2017.pdf (last accessed: 22 September 2022).

63 DOT Order dated 21 June 2022 relating to Spectrum Usage Charges (SUC) for Spectrum in 600MHz, 700MHz, 800MHz, 900MHz, 1800MHz, 2100MHz, 2300MHz, 2500MHz, 3300MHz, and 26GHz bands held by the Telecom Service Providers (TSPs), https://dot.gov.in/sites/default/files/SUC%20Order_0.pdf.

64 Guidelines for Captive Non-Public Network (CNPN) License dated 27 June 2022, <https://dot.gov.in/sites/default/files/CNPN%20Guidelines%2027062022.pdf>.

65 'Total revenue of the broadcaster industry across India from financial year 2014 to 2020, with estimates until 2024', <https://www.statista.com/statistics/796928/india-market-size-of-broadcaster-industry/#:~:text=In%20fiscal%20year%202020%2C%20the,compared%20to%20fiscal%20year%202019> (last accessed: 20 September 2022).

on 15 September 2022, the total number of broadband subscribers until 31 July 2022 were 807.42 million and the overall tele-density is 85.11 per cent.⁶⁶ Moreover, the media and entertainment industry is expected to reach US\$30.9 billion by 2024.⁶⁷

The media distribution and broadcasting, in India, is taken up through four mediums: cable TV service (operated through multi-system operators and local cable operators), DTH operators, IPTV operators and HITS operators. All the four mediums directly supply content to the consumers.

The National Telecom Policy, 1999 categorised cable service providers as 'access providers', together with mobile service providers and fixed access providers. The Cable TV Operators are governed by the Cable Television Networks (Regulation) Act, 1995, along with its allied Rules. The Act requires broadcasters to register as cable operators and multi-system network operators with the registering authority and they must comply with registering and reporting requirements. The Act also obligates them to regulate the content and advertisements broadcast on channels. The IPTV services were introduced in 2008 and HITS services in 2009. The TRAI also laid down a regulatory framework and guidelines for the same.

Further, the amendments to the Cable Television Network Rules⁶⁸ proposed a three-tier grievance redressal mechanism, namely, self-regulation by broadcasters, self-regulation by bodies of broadcasters, and oversight mechanism by the government. In order to address the issue of transparency and consumer welfare, the government recommended cable operators to provide content only through conditional access systems (CAS), hence, they implemented a series of measures to implement CAS. Hence, the broadcasting and distribution segments are regulated by the MIB and the TRAI, respectively.

The Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 and tariff orders provides for obligations of broadcasters, television channels and service providers along with reference connection offers, as provided by TRAI. Moreover, the content providers are also required to comply with the guidelines and directions relating to content and transmission of television channels, as issued by the MIB.

Cinematographic films are regulated under the Cinematograph Act, 1952⁶⁹ establishing the CBFC, which provides for film certification and regulates the content. In the past, the CBFC has regulated harshly on many films and television series including *Taandav*, *Uda Punjab*, *Haider*, *Lipstick Under My Burkha*, stating that the films are too bold for public release, hence must be cut. Looking into the rising issue of film piracy, the MIB introduced the Cinematograph (Amendment) Act, 1952, which made the process of sanctioning films for exhibition more effective and in tune with the changing times, while also curbing the issue of piracy.⁷⁰

66 Telecom Regulatory Authority of India, Press Release No. 63/2022 (15 September 2022), https://www.traai.gov.in/sites/default/files/PR_No.63of2022.pdf (last accessed: 18 October 2022).

67 Invest India – Media Sector, <https://www.investindia.gov.in/sector/media> (last accessed: 18 October 2022).

68 Cable Television Networks Amendment Rules, 2021, https://mib.gov.in/sites/default/files/25-6%20CTN%20Appl%205.5X8.5inch%281%29_0.pdf.

69 The Cinematograph Act, 1952, https://www.cbfcindia.gov.in/main/CBFC_English/Attachments/cine_act1952.pdf.

70 Union Cabinet approves amendment to Cinematograph Act to tackle film piracy, <https://www.livemint.com/industry/media/union-cabinet-approves-amendment-to-cinematograph-act-to-tackle-film-piracy-1549518226819.html> (last accessed: 21 September 2022).

Moreover, through a gazette notification dated 9 November 2020, the digital and online media, along with films and audio-visual programmes were made available by online content providers and news and current affairs content on online platforms. Subsequent to it, the centre also notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, wherein the Rules aimed to regulate content on the OTT platforms and impose a code of ethics for online publishers of new media.⁷¹

After a clarification on 16 October 2020 on a notification dated 18 September 2019 (see Press Note 4 of 2019), the government allowed 26 per cent of FDI through the approval route for digital media entities, news agencies and news aggregators.⁷² However, this clarification was not welcomed by the stakeholders as it puts a direct impact on industry players that are looking to raise investment from foreign investors.⁷³

Further, with the growth of technology, the media is not limited to mainstream electronic and print but digital media, including web-based news portals and other channels have also been increasing immensely. To cope with the loss in traditional means of media, the traditional media houses have moved to OTT platforms by introducing new apps and websites endorsed and owned by them, like Sony Liv, Hotstar, Zee5, etc. Even the telecom service providers have launched their OTT platforms, namely Jio Apps, Vi Movies & TV and Airtel Wynk.⁷⁴

ii Internet-delivered video content

Through a gazette notification dated 9 November 2020, the MIB brought all audio-visual and news and current affairs digital content within the purview of the Ministry. Subsequently, the centre also notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, wherein a code of ethics for online publishers of news media was imposed. However, these Rules were challenged before various high courts as certain provisions of the Code, especially Rule 9, is *ultra vires*, the provisions of the IT Act being beyond delegated power and on 22 March 2021, the Supreme Court stayed all those proceedings and transferred the same to the Supreme Court.⁷⁵

71 Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, <https://mib.gov.in/sites/default/files/IT%28Intermediary%20Guidelines%20and%20Digital%20Media%20Ethics%20Code%29%20Rules%2C%202021%20English.pdf>.

72 'Clarification of the FDI policy of the Government of India with regard to the entities involved in uploading/streaming of news and current affairs through digital media' (16 November 2020), <https://mib.gov.in/sites/default/files/Public%20Notice%20%20regarding%20FDI%20Policy%20.pdf> (last accessed: 21 September 2022).

73 'I&B Ministry's Amit Khare says 26% FDI limit should apply to news aggregators', <https://www.medianama.com/2020/07/223-news-aggregators-amit-khare-fdi/> (last accessed: 22 September 2022).

74 'Over-the-Top Video Services in India: Media Imperialism after Globalization', <https://quod.lib.umich.edu/m/mij/15031809.0006.206?view=text;rgn=main> (last accessed: 22 September 2022).

75 *Nikhil Mangesh Wagle v. Union of India*, WP (L) No. 14172 of 2021.

VI THE YEAR IN REVIEW

The reforms in the telecom sector were the main aim of the government throughout the year. With the efforts of the private players in the sector, the government is looking to make internet accessible throughout the country. The current development in the TMT sector in general and the telecom sector in particular is gradual growth with selective privatisation and managed competition.

The loss faced by the country during the pandemic appears to be recovered now, considering the gross revenue in the telecom sector of the first quarter of FY22 was 648.01 billion rupees.⁷⁶ Market surveys also indicate that with an annual growth of 11 per cent between 2020 and 2023, India is expected to become the fastest-growing telecom advertisement market.

Moreover, the following are some government policy initiatives in the sector:

- a* the Production Linked Incentive (PLI) scheme provides for financial incentives to boost manufacturing in India and, thereby, intends to attract investments in all the segments of the sector;⁷⁷
- b* the Prime Minister Wi-Fi Access Network Interface (PM WANI) service offering public Wi-Fi service through Public Data Offices (PDOs), accessible through 2384 Wi-Fi hotspots at 100 stations across 22 states;⁷⁸
- c* the Bharat Net Project launched to provide broadband connectivity at India's gram panchayat;⁷⁹ and
- d* the DoT launched the Tarang Sanchar portal for sharing information on mobile tower and electromotive force emission compliance.⁸⁰

Further, in the first quarter of FY22, the TMT sector claimed six of the top 10 mergers and acquisitions in the country. Some of them are as follows:

- a* Reliance Industries took a 54 per cent stake in Addverb Technologies, which is an Indian robotic start-up focusing on building automation and robotic solutions for factories and warehouses;⁸¹
- b* HCL Technologies have acquired a 51 per cent stake in Gesellschaft für Bankssysteme GmbH (GBS), which is a German IT consulting firm;⁸²
- c* Infosys has acquired a German-based digital marketing agency for €50 million;⁸³

76 Indian Telecom Industry Analysis (March 2022), <https://www.ibef.org/archives/industry/indian-telecommunications-industry-analysis-reports/indian-telecommunications-industry-analysis-presentation> (last accessed: 22 September 2022).

77 PLI Scheme, <https://dot.gov.in/pli-scheme>.

78 PM WANI, <https://dot.gov.in/pm-wani>.

79 Bharat Broadband Network Limited, <https://bbnl.nic.in/> (last accessed: 24 September 2022).

80 Tarang Sanchar, <https://dot.gov.in/banner/tarang-sanchar>.

81 'RIL picks 54% in robotics firm Addverb Technologies for Rs 983 crore' (18 January 2022), https://www.business-standard.com/article/companies/reliance-invests-132-mn-in-robot-firm-addverb-tech-in-strategic-tie-up-122011800867_1.html (last accessed: 24 September 2022).

82 'HCL Technologies completes acquisition of 51% stake in Gesellschaft für Bankssysteme GmbH' (6 January 2022), <https://www.livemint.com/companies/news/hcl-tech-completes-acquisition-of-51-stake-in-gesellschaft-f-r-bankssysteme-gmbh-11641486376989.html> (last accessed: 24 September 2022).

83 'Infosys to buy Germany-based digital marketing firm oddity for up to 50 mn euros' (22 March 2022), <https://www.businesstoday.in/latest/corporate/story/infosys-to-buy-germany-based-digital-marketing-firm-oddity-for-up-to-50-mn-euros-326860-2022-03-22> (last accessed: 24 September 2022).

- d* Tech Mahindra acquired a Mumbai-based start-up, Thirdware, which offers packaged solutions in areas like robotics, enterprise resource planning and enterprise performance management in a deal worth US\$42 million and 80 per cent stakes in Geomatic. AI, which works for AI-based solutions, digital twins and drone technologies for A\$6 million;⁸⁴ and
- e* in April 2022, TRAI issued a Consultation Paper on Issues Relating to Media Ownership⁸⁵ on a reference by the MIB, wherein they discussed the issue of media ownership and control, cross-media ownership, vertical integration in the sector, current regime and asked for stakeholder's suggestions on solutions for issues.

In May 2022, TRAI published a Consultation Paper on Issues related to the New Regulatory Framework for Broadcasting and Cable services,⁸⁶ in which they discussed the New Regulatory Framework, 2020 and the Tariff Order 2.0. Further, news articles also suggest that TRAI is planning to amend broadcast tariff guidelines after the logging of the New Tariff Order 2.0.⁸⁷

In July, 2022, TRAI issued another Consultation paper on Renewal of Multi-System Operators (MSOs) Registration⁸⁸ on the provisions for continuance of service by MSOs to consumers even after expiry of the previous registration when a final decision on its application for renewal is awaited, and Consultation Paper on Rationalization of Entry Fee and Bank Guarantees,⁸⁹ wherein TRAI was looking for stakeholders' consultation on two issues, namely, uniformly levying entry fees in every service area under different unified licences, and merger of performance bank guarantee and financial bank guarantee into one single bank guarantee.

Moreover, for a country like India, which is the largest democracy and one in which the Supreme Court has declared right to privacy as a fundamental right, it is discouraging that we do not have a sound data protection legislation as the Personal Data Protection Bill was withdrawn from the Parliament this year. Where the Prime Minister has been routing for the Digital India campaign for the past five years, the government needs to realise that legislation is necessary for the safety of its citizens in the digitised society. There has been discussion on social media platforms that the reason why this Bill was withdrawn from the Parliament is because of the continuous pressure from Big Tech. The Bill was way too harsh for these Big Techs and, therefore, the government will enact a new law that would be less stringent, limiting the liability of these tech giants.

84 'Tech Mahindra acquires 80% stake in Australian AI firm, Geomatic.AI' (16 February 2022), https://www.business-standard.com/article/news-cm/tech-mahindra-acquires-80-stake-in-australian-ai-firm-geomatic-ai-122021600300_1.html (last accessed: 24 September 2022).

85 Consultation Paper on Issues Relating to Media Ownership dated 12 April 2022, https://www.trai.gov.in/sites/default/files/CP_IRMO_12042022.pdf.

86 Consultation Paper on Issues related to New Regulatory Framework for Broadcasting and Cable services dated 7 May 2022, https://www.trai.gov.in/sites/default/files/CP_07052022.pdf.

87 'TRAI may issue amended broadcast tariff norms in Oct second half' (20 September 2022), <https://www.exchange4media.com/media-tv-news/trai-may-issue-amended-broadcast-tariff-norms-in-oct-second-half-122502.html> (last accessed: 24 September 2022).

88 Consultation paper on Renewal of Multi-System Operators (MSOs) Registration dated 20 July 2022, https://www.trai.gov.in/sites/default/files/CP_20072022_0.pdf.

89 Consultation Paper on Rationalization of Entry Fee and Bank Guarantees dated 26 July 2022, https://www.trai.gov.in/sites/default/files/CP_26072022_0.pdf.

The 5G spectrum auction was the most talked about event in the sector this year. With three players in the telecom sector, Adani Group's entry in the sector with its participation in the 5G auction leaves the Vodafone Idea Group apprehensive if prices are brought into play as the Ambani Group and Adani Group would be competing against each other to determine who rules the Digital India campaign. However, the Adani group clarified in a media statement that they do not wish to enter into the consumer mobility market but the spectrum is required to develop its digital platform with super applications, data centres and industrial command and control centres.⁹⁰ They would also lease their 5G airwaves to other enterprise. Further, the demand for smartphones in India is likely to reach 400 million people by 2026 primarily because of the launch of 5G. 5G would alone contribute up to 80 per cent of the devices by 2026.⁹¹

On 23 September 2022, the government introduced the Draft Telecommunication Bill, 2022⁹² with an aim to develop a modern and future-ready legislation, as the primary statute currently in place for telecommunication sector is the Indian Telegraph Act, 1885. The explanatory note to the Bill acknowledges the same while also putting forth how the telecommunication technology has evolved with time and that the world has stopped using 'telegraphs' a decade ago. The government has examined the laws in other jurisdictions, such as the United Kingdom, Japan, Singapore, Australia and the European Union while drafting the Bill.

The proposed Bill seeks to consolidate three legislations, namely, the Indian Telegraph Act, 1885, the Indian Wireless Telegraphy Act, 1933 and The Telegraph Wires (Unlawful Protection) Act, 1950. The major changes brought by the Bill are as follows:

- a* the definition of 'telecommunication services' is enlarged by including OTT communication services like Telegram and WhatsApp, satellite-based communication services, in-flight communication and maritime services, etc. under its ambit;
- b* the Bill provides that the spectrum can be auctioned or assigned through administrative proceedings for government functions or purposes, depending upon the requirements;
- c* the Bill now allows sharing, trading, leasing and surrender of the spectrum, subject to terms and conditions and with the applicable fees or charges;
- d* to ensure effective use of spectrum, the Bill provides that in cases of insolvency of any entity engaged in spectrum use, the spectrum assigned will revert to the government's control;
- e* the Bill has also proposed to waive charges, fees and penalties of entities, when required in interest of public and ensure fair competition;
- f* the Bill lays down provision for the central government to impose penalties in cases of breach of terms and conditions of licence, authorisation and registration along with framework to provide voluntary undertaking for companies to undertake the breach;
- g* the Bill allows that the person aggrieved by decisions of the central government can appeal before the appellate tribunal (i.e., TDSAT);

90 '5G: Adani Group to join spectrum bid; won't enter consumer mobility space' (9 July 2022), https://www.business-standard.com/article/companies/adani-to-join-telecom-spectrum-bid-will-not-enter-consumer-mobility-space-122070900633_1.html (last accessed: 24 September 2022).

91 Telecom Regulatory Authority of India, Press Release No. 37/2021, https://www.trai.gov.in/sites/default/files/PR_No.37of2021_0.pdf (last accessed: 18 September 2022).

92 Indian Telecommunication Bill, 2022, <https://dot.gov.in/sites/default/files/Draft%20Indian%20Telecommunication%20Bill%2C%202022.pdf>.

- b* the Bill also allows the central government to create an alternate dispute resolution mechanism to resolve disputes that it thinks fit to be referred to the same;
- i* the Bill has repurposed the Universal Service Obligation Fund as the Telecommunication Development Fund;
- j* the Bill has widened the scope of Right of Way (RoW) for rapid roll-out of newer technologies and removed the limitations by providing an effective framework for the same. The permission required for RoW would now be in an expeditious manner as the rejection of such application is limited in the Bill;
- k* the Bill simplified the procedure for mergers and acquisitions as companies will only have to intimate the licensing authority of such mergers and acquisitions;
- l* the Bill has introduced a chapter specifically dealing with public safety and national security, wherein the framework is set to address situations of public emergency, public safety or national security concerns;
- m* the Bill provides for technological development and facilitates innovation by allowing a 'regulatory sandbox' to conduct tests for a new telecommunication innovation; and
- n* for the protection of the telecom users, the Bill provides for measures for protection of users, as well as the duty of users, in general.

The Bill seems to limit the TRAI's power to merely a recommendatory body from the sectoral watchdog as the proposed Bill removes the current mandate that the DoT has to seek TRAI's view before issuing a new licence to a service provider through an amendment in the TRAI Act. Currently, the proposed Bill is under the public domain to receive the stakeholders' comments.

VII CONCLUSIONS AND OUTLOOK

It would not be wrong to say that the telecom sector in India has witnessed instability as many telecom companies went bankrupt as Reliance Jio entered the market. The AGR dues and changing competition dynamics were also factors in this. However, the situation has now ameliorated, even when there are three market players in the sector. The government is working hard to prepare a better relief package for the industry as the companies are still under immense pressure to keep their stronghold in the sector.

The government has allowed 100 per cent FDI under automatic route, infrastructure sharing and built-in right of way for easy access and faster clearance of applications, while also planning to bring a uniform charge for entry fees under the Unified License. Another example is the production-linked incentive (PLI)⁹³ with an aim to push local players to produce more within the country. These efforts are likely to boom the revenue of the operators, and ultimately for the sector.

With the 5G auction, there is also a scope for wireless connectivity going upstream for both enterprise and retail. 5G will also have a positive impact on the revenue of the sector with a compound annual growth rate (CAGR) expected to be at 10 per cent between 2023 and 2025 and the smartphone industry will lead the growth at a CAGR of 15.9 per cent.⁹⁴ While the government is routing for the Digital India campaign, the government

⁹³ PLI Scheme, <https://dot.gov.in/pli-scheme>.

⁹⁴ 'Telecom industry set to cross the Rs 10 lakh crores landmark: report' (7 September 2022), <https://economictimes.indiatimes.com/industry/telecom/telecom-news/telecom-industry-set-to-cross-the-rs->

is also putting continuous efforts into helping the companies get up to pace again. One such example is the government's offer to purchase major shares of Vodafone Idea, and the company's agreement to it.

The Indian gaming industry is another important area in the TMT industry which must also be considered in the context of the development of the sector. The pandemic has led to a rise in the number of online gaming players. The online gaming industry across India was valued at around 79 billion rupees in the year 2021, marking a leap from about 65 billion rupees in the previous year.⁹⁵

According to a survey by Statista,⁹⁶ the market value of the gaming industry in India is nearly US\$1 billion and could go up to US\$3.4 billion in 2024. Even according to the statistics provided in the Online Gaming (Regulation) Bill, the online gaming industry in India could grow to US\$5 billion by 2025. With Dream 11, the fantasy sport platform, sponsoring the Indian Premier League 2020,⁹⁷ interest in fantasy sport has significantly grown in India. The Online Fantasy Sport Platform (OFSP) includes not just Dream 11, but many other players such as My 11 Circle, My Team 11, Howzat Fantasy, that have gained prominence in recent years.

With a view to regulate the sector, The Online Gaming (Regulation) Bill, 2022, has been introduced in Lok Sabha on 1 April 2022. The Bill aims to 'establish an effective regime to regulate online gaming industry to prevent fraud and misuse and for matters connected therewith or incidental thereto'.⁹⁸

Apart from this, the Web 3.0 and Metaverse are also new domains which are recently in discussion. The tech companies are exploring the Metaverse and investors are looking at favourable opportunities to invest in the same as it is believed that the new age of gaming will empower the users as finance and gaming are the two biggest applications in Web 3.0. Its benefit is that the assets in the form of cryptos and NFTs earned in one game can be easily used in other games.

To conclude, the year witnessed massive technology advancements, innovations, and an increase in focus on technologies like artificial intelligence and IOT-enabled products: India witnessed adoptions of numerous digital solutions. With the growth in 5G, AI, online gaming, Web 3.0, metaverse and other technologies, the country is on the trail of development.

10-lakh-crores-landmark-report/articleshow/94055962.cms (last accessed: 24 September 2022).

95 The Online Gaming (Regulation) Bill, 2022, <http://164.100.24.219/BillsTexts/LSBillTexts/asintroduced/78%20of%202022%20as%20introduced.pdf>.

96 <https://www.statista.com/statistics/795281/india-market-size-of-gaming-industry/>.

97 'Dream11 is new IPL 2020 title sponsor with winning bid of Rs 222 crore' (19 August 2020), <https://timesofindia.indiatimes.com/sports/cricket/ipl/top-stories/ipl-title-rights-dream11-is-new-ipl-2020-title-sponsor-with-winning-bid-of-rs-222-crore/articleshow/77609893.cms> (last accessed: 24 September 2022).

98 The Online Gaming (Regulation) Bill, 2022, <http://164.100.24.219/BillsTexts/LSBillTexts/asintroduced/78%20of%202022%20as%20introduced.pdf>.

ISBN 978-1-80449-141-6