Europäische Patent-organisation	European Patent Organisation	Organisation européenne des brevets	**CA/47/22**
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Verwaltungsrat	Administrative Council	Conseil d'administration	

SUBJECT: Set-up and Blueprint of the Observatory on Patents and Technology

SUBMITTED BY: President of the European Patent Office

ADDRESSEES: Administrative Council (for opinion)

SUMMARY

The European Patent Office (EPO) is proposing the creation of a dedicated and unique Observatory on Patents and Technology. The Observatory will contribute to a deeper, more comprehensive understanding of important issues related to the future of innovation and technology and of their impact on the patent system. The Observatory will provide the EPN and its stakeholders with insights into developments in the innovation sector and patent landscape. Capitalising on this knowledge, the EPO and its partners will be in the position to better respond to present challenges, anticipate change and take measures leading to economic, social and environmental progress.

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I.   STRATEGIC/OPERATIONAL

1.   Strategic.

II.   RECOMMENDATION

2.   For opinion.

III.   MAJORITY NEEDED

3.   N/A

IV.   CONTEXT

4.   As the authority responsible for the search and examination of European patent applications, the European Patent Office (EPO) has always understood the importance of patent information as a central pillar of the European patent system, a global flagship for quality and legal certainty. Throughout its life, the EPO has therefore expanded its patent information capacities by forging agreements with partners around the world to obtain patent information. It has built advanced databases to house the data and tools it makes available. It has developed networks to support its patent data efforts, set up intelligence units to produce landmark studies that provide decision-makers with insight and maximised outreach efforts to raise awareness on patent information. The progress made in making patent information and knowledge available has therefore been considerable. But as with all journeys, there is always room for improvement in the light of lessons learnt.

5.   Key Initiative 6 "Measure, evaluate and assess developments in the IP system with stakeholder involvement" under Goal 5 "Secure long-term sustainability" of the Strategic Plan 2023 (CA/65/19) foresees the creation of the EPO Observatory with the aim to contribute a deeper, more comprehensive understanding of important issues that will help the EPN and stakeholders, to understand developments and prepare for future challenges.

6.   Based on the principles of the co-operation framework (CA/27/20), the Office presented first orientation for a future Observatory to the Annual Meeting on Cooperation in 2021 providing an occasion to hear the views and ideas of its Member States.

7.   Based on this first consultation, the Office developed an orientation paper, which was shared with the Member States early February 2022 before the start of the public consultation via epo.org on 9 February. A report on the feedback received during the consultation has been shared with the Member States early April 2022. On 4 May, at the Annual Meeting on Co-operation with Member States, a further presentation of the Observatory concept has been delivered by the Office and provided an important occasion to collect the views of the Member States on further refinements based on the feedback received.

8.   As the result of this close consultation and positive feedback, a concept for the set-up of the EPO Observatory on Patents and Technology, as well as its Blueprint, are presented to the Administrative Council for its opinion.

V.   ARGUMENTS

A.   INTRODUCTION

9.   Lying at the heart of any patent system is an inherent contract: the applicant to whom the patent is granted receives legal protection in return for making the invention public. This simple tenet underpins not just the European Patent Convention (EPC), but the very mission and operations of the EPO. The EPO is on the one hand built on a first-rate patent granting process that provides applicants with high quality patents. On the other, resources have been devoted to building world class databases of patent information and making it freely available to all those who wish to foray into the world of patent information.

10.   But the world of patent information is also an expanding world. With the global increase in applications, prior art and the associated patent data has increased exponentially. In response, the EPO has persevered in providing patent information by striking agreements with partners around the world to ensure the collections remain up to date and complete. New tools such as Espacenet 2.0 have also been developed to ensure that the information is retrievable and accessible.

11.   This relentless focus on patent information has proved decisive for the EPO in fulfilling its mission. It has helped the EPO ensure that the quality of its products remains high, and that search products, for example, remain one of the jewels in the EPO's array of services. At the same time, it has also made sure that patent information continues to be readily available to the public. Researchers, scientists and inventors have been able to look at prior art and take the next inventive step. In taking those inventive steps, innovators have pushed society forward on a journey that has continually advanced the state of the art. The combination of prior art and bright minds has delivered breakthrough after breakthrough in developing solutions to some of society's most pressing issues. Similarly, it has been possible to model data and analyse patent information to gain strategic insight on trends and developments in innovation. Businesses have been able to use such data to take effective strategic decisions in pursuit of economic growth.

12.   In recent years, the EPO has sought to capitalise on new possibilities by shifting its focus from providing patent information to patent knowledge. In undertaking this change, the EPO has aimed to provide greater understanding of how patent information and patents in general can be leveraged to the greatest extent possible and deliver the greatest possible impact. The Office has ramped up production of ground-breaking studies that provide valuable insight into innovation trends and support effective policy decisions. Similarly, the PATLIB 2.0 programme has sought to increase the capabilities of the PATLIB network in helping small and medium-sized enterprises (SMEs), universities and researchers understand how patents and patent information can drive growth. Major conferences have also taken place to debate game-changing technologies.

13. Altogether, these measures have helped to leverage the power of information and to foster general debate on topical issues across the patent landscape. However, there is still great scope for a specialised forum in which representatives from across the whole innovation system can launch a fulsome dialogue based on deep analyses of patenting trends.

14. The current absence of such a central focal point powered by a rich, diverse and connected network of stakeholders lies in direct contradiction to the EPO's current strategy. In SP2023, the EPO put in place five strategic goals which ultimately aim to achieve not just a more sustainable institution, but also a more sustainable patent system. It is about working with stakeholders from across the innovation system to plan ahead and deliver benefits long into the future. In doing so, the EPO aims to ensure that subsequent generations have an EPO and patent system that are effective and powerful.

15. The innovation ecosystem is a complex and rich web of players specialised in an array of activities. Without their input and feedback, it will be increasingly difficult to understand the many complexities of the European innovation system, let alone develop measures to support it.

16. As a European institution founded on European values and ideals, the EPO is committed to ensuring that we draw strength from a plurality of views and to understanding the different ways in which data can be interpreted – especially at a time when debate on some subjects in society has been led by polemics and unverified information.

17. The EPO is therefore proposing the creation of a dedicated and unique Observatory on Patents and Technology, as an internal business unit of the Office. The Observatory will contribute to a deeper, more comprehensive understanding of important issues related to the future of innovation and technology and of their impact on the patent system. In turn, this will help the EPO, the European Patent Network and its stakeholders to anticipate developments and address future challenges. The output of the Observatory will be discussion and debate based on analyses and studies, the subjects of which can be proposed by the stakeholders. When it comes to participation, the underlying ethos of the Observatory will be *driven by expertise, yet accessible to all*.

a)   **Future Opportunities**

18. The EPO is an organisation based on feedback loops and a commitment to excellence and constantly evaluates opportunities for improvement. A internal mapping exercise of the wealth of knowledge products currently available at the EPO has identified some 105 different products. The same exercise revealed, however, that an observatory could deliver a number of advantages: firstly, it would allow the EPO to deliver its knowledge products to stakeholders in a more harmonised manner; secondly, such harmonisation would help ensure access to knowledge products for stakeholders; and, thirdly, a more efficient approach could lead to exchanges with a wider range of external stakeholders.

19.   The EPO's own experience also shows that addressing a number of other, more specific issues would generate benefits for users. The focus here is on understanding the diversity of the innovation ecosystem, enhancing mapping and visualisation of data to support policy makers, producing more user-friendly and accessible information, and enhancing outreach efforts.

20.   **Understand the diversity of the patent system** – Innovation ecosystems are highly diverse and need to be better understood when providing insight. For example, there are substantial differences in the nature and lifecycles of technologies. In addition, there are differences in how IP rights are used to secure investments, enable collaboration and commercialise innovative solutions. These need to be better understood in order to demonstrate the transformative role played by IP rights. Generating actionable insights on the use of patents – especially by academia and SMEs – therefore means delving deeper into the microeconomic contributions made by the various societal and economic sectors, and IP's role in catalysing technology transformations.

21.   **Support effective decision-making** – Political leaders and institutions increasingly face demands for action on pressing challenges such as climate change and global health issues. Innovative solutions are part of the answer. Promoting innovation can accelerate society's progress towards a more sustainable future, as set out by the United Nations in its 17 Sustainable Development Goals (SDGs). Going forward, the focus will be on leveraging patent intelligence to give public and private sector leaders the tools they need to make smarter decisions that help emerging technologies thrive. In practice, this will mean enhancing patent data mapping and visualisation to:

- provide stakeholders with accurate, cutting-edge insights on emerging technologies that allow them to steer their R&D efforts beyond the state-of-the-art;

- gain a deeper understanding of existing technologies and their ecosystems to promote new ideas and solutions;

- enable targeted, high-impact private and public funding;

- foster commercial partnerships aimed at bringing innovative and sustainable technologies to market, potentially with a geographical mapping of the key actors in the relevant technology within local ecosystems.

22. **Provide user-friendly and accessible information** – Related to mapping and visualisation, producing high-impact patent information also hinges on making the technical information displayed in patent applications more user friendly and accessible. Despite the considerable progress in the fields of patent information and patent knowledge, and past efforts to raise awareness of IP rights in recent decades, the actual usage of studies and findings remains limited to specific industry sectors and groups, i.e. large and multinational enterprises or IP specialists in high-GDP countries. Entities such as universities, research centres and SMEs, and likewise individual inventors, are still in the process of coming to fully understand how patents can help them to commercialise innovative solutions and recoup R&D investments. This is largely due to the legal complexity of the patent system, and IP systems in general, and to post-grant patent costs, mainly associated with litigation, technology funding and commercialisation bottlenecks.

23. The challenge is to reach out to specific groups and professionals – such as youngsters, scientists, investors – who are not familiar with the technicalities of the patent system, and may not even be aware of its potential impact on them. Developing tailor-made approaches can help. Adapting patent knowledge so that it "speaks" to these different groups in a way that is clear and understandable is a crucial first step.

24. **Enhance communication** – New products and communication channels need to be exploited further to reach out to broader audiences with more targeted messaging. Multimedia products and digital channels have proven effective tools for conveying complex messages in an engaging way, while social networks have democratised dissemination of these messages and enhanced innovation-related communication.

25. Raising awareness of IP across Europe, however, is a challenge that calls for a joint response. Building on the shared understanding that national offices are best placed to communicate at the local level with tailored messages. CoCoNet has also proven to be an excellent forum for conceiving and implementing joint Europe-wide campaigns for the Observatory.

B. THE OBSERVATORY ON PATENTS AND TECHNOLOGY: NEW HORIZONS FOR PATENT KNOWLEDGE

26. Building on the EPO's past experience, and the lessons learnt from it, there is now a tremendous opportunity to put in place a new entity that is better placed to unlock the true potential of patent information. With the right structure and support, the EPO's unrivalled collection of patent data and information can be combined with stakeholder input and expertise to deliver the next generation of IP knowledge, one that is better suited to serve all actors in the innovation ecosystem. Talents from the European Patent Network are invited to play a far-reaching role in this transformation.

27.   Launching an EPO Observatory will organise and mobilise a set of networks that brings together multidisciplinary skills and IP expertise to foster innovation right across Europe and build a stronger European patent system. By involving stakeholders in a holistic, inclusive debate, the Observatory will identify ways in which the patent system can develop further in order to stimulate innovation, economic growth, employment, competitiveness and sustainable development.

28.   In line with its guiding principles, the Observatory's activities will be driven by debates based on accurate, impartial and verifiable information. It will aim to help build a sustainable future for innovation by broadening the patent ecosystem's outreach and enhancing access to IP and technology-related knowledge. The Observatory will also evaluate its activities by monitoring their impact and identifying gaps both in patent and IP-related knowledge and in the understanding of complex technological concepts. This monitoring process will feed into the EPO's patent knowledge services, helping them to evolve into advanced patent intelligence services that include enhanced mapping and visualisation of existing technological solutions.

29.   By bringing together a diverse range of views, perspectives and expertise, the Observatory will aim to:

- **Improve** the understanding of technologies and technological landscapes via the mapping and visualisation of patent and non-patent literature and related data

- **Transform** patent information into patent knowledge and a deeper understanding of the evolving needs of EPO stakeholders and the public in terms of data-based evidence and specific knowledge, CEU studies, etc.

- **Share** innovation-related knowledge and best practices

- **Disseminate** knowledge, in particular through wider access to expert debates and exchanges

- **Raise awareness** of innovation and patents and its contribution to sustainable development

- **Drive** innovation with better decision-making

- **Contribute** to shaping a patent system that is smarter and more sustainable

- **Create** impact (multiplier effect) and foster new ways of thinking

- **"Connect the dots"** between the different stakeholders developing innovative solutions or impacted by technology-related developments.

a) **Building a diverse, inclusive network with a broader outreach**

30. The Observatory will bring together experts from the EPN and from across civil society, including from the public and private sectors, industry and academia at the national, pan-European and international levels. A non-exhaustive list of parties that could be involved or interested in participating in the Observatory's activities includes representatives of the EPO's governing bodies, or individuals nominated by them, and of European and international organisations.

   The public sector will be represented by a balanced range of experts from non-governmental organisations and non-profit service providers. Members will be selected according to criteria to be developed on the basis of the Observatory's guiding principles.

31. Public bodies promoting innovation and technology transfer, institutions involved in research or IP education, science parks and innovation centres will also be invited to share their perspectives and best practices in the context of stream-based initiatives.

32. In terms of the private sector, the Observatory will feature experts from international, European and national bodies and associations representing both a broad range of fields, including economics, finance and research, and a broad range of IP, technology and innovation stakeholders as well as entrepreneurs, individual inventors, and start-ups.

b) **Guiding principles**

33. The following principles will guide the Observatory's work:

   - **Evidence-based approach drawing on clearly sourced data:** the Observatory's debates will be underpinned by reliable, up-to-date patent data that can help business leaders and policy makers to take better informed, evidence-based decisions. Clear sourcing of data will make it fully traceable, creating a solid, scientific foundation for discussions based on hard facts.

   - **Transparency:** By creating a digital space open to all innovation stakeholders, the Observatory will showcase the full range of the EPO's patent knowledge activities, making them more accessible to a non-specialist audience with regular, clear reporting.

   - **Diversity:** Open to all stakeholders – regardless of their geographical origin, gender or age – the Observatory will break down any barriers, creating scope for a broader, richer IP debate.

   - **Inclusiveness:** The Observatory will invite both supporters and opponents of the patent system to share their views and will welcome participants from all corners of the innovation community. It will aim to strike the right balance between involving a broad range of participants and ensuring the optimum number in terms of efficiency and the ability to achieve its goals.

- **Collaboration:** By working closely with the EPO's member states and user associations, as well as a whole range of private and public sector players, the Observatory will aim to bring stakeholders together to raise overall awareness of IP's potential benefits.

- **Creating synergies:** Building further on the collaboration principle, the Observatory will ensure that its co-operation with other stakeholders produces a combined effect that is greater than the sum of the effects of their individual activities.

- **Avoiding duplication of effort:** The Observatory will avoid duplicating the efforts of other stakeholders in carrying out its activities. Its focus will remain on creating added value and a structure that is unique in its position to offer capabilities beyond those that are found in the present innovation ecosystem.

- **Subsidiarity:** The Observatory will aim to add value to existing patent knowledge initiatives at a national and international level, and a new dimension to the global IP debate.

C. DYNAMICS DRIVING THE OBSERVATORY

a) Sharing views and supporting active debate

34. The Observatory aims to become a centre for disruptive debate and analysis of the European patent system's impact on innovation, competitiveness, economic growth and sustainability. It will set the stage for insightful discussions; create an infrastructure that encourages open dialogue; and provide consultation tools that enable stakeholders to debate topical issues and ground-breaking innovation.

35. Debate and digital participation will initially revolve around three start-up topic-based streams. Beyond forging a deeper understanding of the patent system, the Observatory will also create knowledge that shapes the future of the innovation ecosystem, evaluate the output of the innovation framework and prompt stakeholders to engage with innovation processes and developments in the patent system. Participants will be invited to topic-based discussions that mark the first step towards developing networks related to the three streams.

36. Discussions will focus on statistical data, reports and studies produced by the EPO. Studies focused on one or a subset of European Patent Organisation countries may be carried out in collaboration with their national offices to expand the scope of topics and questions that can be addressed, as well as the range of national data sources. By creating a network of such sources, the Observatory will deepen discussions on specific technologies and industries.

37. The Observatory will also have a role in proposing analyses and reports. It may suggest topics of interest for potential studies and surveys to be carried out by the Office. These studies, or the preparatory work for them, may also be performed by experts participating in the Academic Research Programme. They, in turn, will be complemented by a new series of policy papers by external guest experts, constantly involving more experts in the innovation debate.

38.   Discussions will be organised in formats such as seminars, round tables, TED talks, workshops and conferences, with contributions from the EPO units that produce knowledge. In addition to representatives of the different stakeholders, the Observatory will aim to foster public participation whenever possible, while still ensuring levels of participation that allow for meaningful exchange.

b)   Outreach

39.   While debate and discussion may be the primary aim of the Observatory, raising awareness of the findings and the work of the Observatory will be crucial in order to have a positive impact on the innovation sector, in addition to specialist stakeholders.

40.   To broaden its outreach, the Observatory may therefore propose awareness-raising campaigns to be carried out at a European or national level in close liaison with partners and stakeholders. These communication activities will also disseminate the research, evidence and patent-related intelligence produced and supported by the EPO. This in turn will help trigger greater participation.

41.   Drawing on the expertise of the European Patent Academy, the Observatory will also aim to support educational activities. In this way, the Observatory will pioneer discussions on complex subjects and, with the Academy's support, it will transform technical, policy and scientific output into transformative learning.

42.   Outreach, participation – and also greater transparency – will be supported by new digital tools. New communication channels will help connect wide audiences. Similarly, technologies associated with the new normal, such as virtual conferencing facilities, will support a greater degree of participation, regardless of geographic location. New digital tools specifically designed to promote information sharing will also be used to facilitate a seamless exchange of information between stakeholders and to support other forms of input such as calls for interest, calls for evidence and consultations.

c)   The structure

43.   The Observatory on Patents and Technology will be an internal business unit of the Office.

44.   The Observatory will adopt a lean and agile approach, dedicated to learning from its experiences in order to improve. Adapting constantly to today's fast-changing business environment, the Observatory will also keep a finger on the pulse of innovation. By bringing together IP's brightest minds in challenging projects that embrace radically new ways of tackling problems, the Observatory aims to have a tangible positive impact on the innovation ecosystem. People – IP thought leaders with bold ideas – will be the driving force behind the Observatory. Beyond drawing on the EPO's rich pool of internal talent, the Observatory will also issue calls for seconded national experts to contribute to its activities with their expertise. In line with its guiding principles, the Observatory will aim to ensure broad geographical and sectorial coverage, bringing multidisciplinary expertise to bear on problems discussed by groups of individuals from different backgrounds, age groups and countries.

45.   Primarily, however, the Observatory will operate as a digital hub offering access to patent knowledge (pull) and conducting regular outreach activities (push). Thanks to digital videoconferencing technology, discussions will contribute to environmental sustainability and reinforce collaboration across borders and technical sectors.

46.   By holding them online, participation in Observatory meetings will be scaled to enable meaningful and focused exchanges. Digital conferences will be organised using a modular approach, based on "hot topics" emerging from the streams. In-person events will be organised as and when the need arises. Some Observatory sessions will also be opened up to the general public via digital conferencing platforms.

47.   The Observatory will prepare a biennial work plan to ensure a multidisciplinary approach to the most relevant innovation and patent-related issues.

48.   Building-up on the principles of transparency and co-creation that are being applied all across the four pillars of co-operation with the members of the EPN and following the same rationale adopted in the recent modernisation of the structures of the Academy (CA/64/21), unanimously approved by the Administrative Council, the biennial work plan will be subject to consultation and discussed and presented to the Technical and Operational Support Committee (TOSC) for opinion. This will provide all member-states, extension states and observers with an equal opportunity to provide their views, opinion and suggestions.

49.   A yearly overview of the Observatory activities will be presented to the TOSC and the Administrative Council and published as a dedicated Annex to the EPO's Annual Review.

d)   Start-up streams

50.   In its start-up phase the Observatory's activities will be organised around three main streams:

- technology intelligence

- legal and innovation policies

- diversity and transformation

(i)   Stream 1: technology intelligence stream

51.   In the technology intelligence stream, trends and technological developments at a national, pan-European and international level will be discussed around the following clusters:

- materials and production

- agri-food

- electronics and physics

- health

- infrastructure and mechanics

- energy

- mobility and space technologies

- digital

52. As technologies mature and evolve, clusters may be added or reorganised accordingly.

53. This stream will map critical technology developments (i.e. drivers of ongoing transformations and newly emerging technologies with disruptive potential) and identify their respective pan-European innovation ecosystems, along with their key components.

54. On this basis, discussions will aim to promote co-ordination and collaboration among the key players to bring innovative solutions to market. Networking discussions will focus on:

- improving skills and knowledge of defining and analysing technical problems and generating potential solutions through horizon-scanning of existing or new technical solutions

- increasing the visibility of market facilitators, intermediaries and the public and private funding available at national, EU and international levels, as well as at the different stages of the innovation cycle

- showcasing best practices in using IP and technical solutions to foster partnerships

- raising awareness of "physical" infrastructures to support innovation such as incubators, accelerators and science parks

- increasing the visibility and availability of public-domain technologies, technologies available for licensing and open data

- creating a platform for exchanges between all key actors in the innovation ecosystem

(ii) Stream 2: legal and innovation policies

55. A second stream revolving around legal and innovation policies will span five areas for discussion. Firstly, patents, patent knowledge and intelligence will be analysed in the context of the broader innovation framework, related economic tools (i.e. public funding and taxation) and branches of the law (i.e. competition law and trade law).

56.   Secondly, patents will be studied in the context of the IP system, with a focus on closely related types of IP right, such as designs, trade secrets, standard-essential patents (SEPs) and supplementary protection certificates (SPCs).

57.   Thirdly, the legal and innovation policies stream will also provide a forum for delving deeper into legal "hot topics" such as biotechnology and genomics.

58.   Fourthly, essential legal debates touching upon convergence of practice will also be tackled.

59.   Finally, this stream also covers topical issues and debates, such as licensing around COVID-19 technologies or standard-essential patents and focus on "last-mile" considerations in the patent system, such as the tangible impact of legal and innovation policies.

60.   Discussions will draw on the expertise of both internal units and external stakeholders, with patent lawyers and judges' networks playing a key role. The epi, BusinessEurope and legal research centres will also be regularly invited to participate in discussions, with other participants selected according to the topic on the table.

(iii)   Stream 3: diversity and transformation

61.   The third stream will focus on repackaging the insights generated by the other two streams to make them clear, understandable and accessible to a non-specialist audience. In practice, that means redesigning content in multiple formats to address different stakeholder groups. Overall, this stream aims to:

    •   increase the diversity and inclusion of under-represented actors in the innovation ecosystem such as women, young people, SMEs, universities and research centres

    •   expand the younger generation's skills and knowledge in terms of defining and analysing technical problems and generating potential solutions by horizon-scanning existing technical solutions

    •   raise awareness of the various tools available to secure the results of investments in new products and processes

    •   make the patent system understandable to non-specialist audiences

62.   Another of this stream's key objectives is to promote sustainable innovation by transforming data on sustainable technologies and patent examiner insights into communications that non-specialists can understand. This will help a broader audience to grasp complex technological concepts related to sustainability.

63.   All three start-up streams will furthermore look into a diversity of facets related to artificial intelligence (AI) and corresponding developments.

D.   NEXT STEPS

64.   A preparatory phase is expected to be initiated after the presentation of this document to the Administrative Council for opinion, and will cover important steps leading to the launch of the operation of the Observatory in the second half of 2023, such as developing a detailed planning of budget, forming the team of the Observatory, planning of secondments from the national offices, developing a communication plan, building the Observatory network, drafting the first biennial workplan proposal for consultation and presentation to the TOSC.

VI.   <u>ALTERNATIVES</u>

65.   Not applicable.

VII.   <u>FINANCIAL IMPLICATIONS</u>

66.   For its activities the Observatory will make use of digital formats and vast internal EPO expertise. Therefore, a size of 6 FTEs is considered to be suitable to launch the Observatory activities under the start-up streams.

67.   A budget of 500 000 EUR is proposed for the Observatory in 2023 (CA/50/22).

VIII.   <u>LEGAL BASIS</u>

68.   Article 10 EPC

IX.   <u>DOCUMENTS CITED</u>

69.   CA/65/19, CA/27/20, CA/64/21, CA/32/22, CA/32/22 Add.1, CA/50/22

X.   <u>RECOMMENDATION FOR PUBLICATION</u>

70.   Yes