Minutes of Meeting of 5 Day Online Workshop on 'Patent Search & Filing: The Roadway to IP Commercialization'

Day 1: 11th January, 2021

Organized by

DST-Centre for Policy Research (CPR) at Panjab University, Chandigarh
and
Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology Transfer (FITT), IIT Delhi

Speakers:

1. **Ms. Divya Kaushik, Scientist, PIC-TISC, Punjab State Council for Science & Technology, Chandigarh.**
2. **Dr. Kavita Bansal, Patent Agent, Founder, Shodh Raksha, Mohali**

A training workshop on the theme of "Patent Search & Filing" organized by DST-CPR, P.U. Chandigarh in collaboration of I-TTO and FITT, IIT Delhi for researchers, academicians, industrialists and scientists was inaugurated today through 5 days' webinar series by Prof. Nirmala Chongtham, Coordinator and Ms. Reema Sahni, Project Manager, i-TTO, IIT, Delhi. Ms. Reema Sahini welcomed all the participants and gave brief highlights of the workshop. The objective of this workshop is to sensitize the researchers to take their research work from lab to market. This is imperative as an inventor's responsibility to make their work commercialized and do a research useful for society. The workshop also aims to spread awareness among researchers about the significance of prior art search to undertake a project work as per the demand of the society. This workshop offers a complete package as a guiding principle of the methodology of patent filing and other Intellectual Property Rights (IPR), technology transfer and various patent searching tools. The speakers of the workshop involve an integrating team of scientists, patent agents'/patent attorneys, academicians, entrepreneurs, patent examiners and many more. Ms. Reema Sahni motivated the students to take note of all the webinars for competing significantly in Quiz session to be conducted on last day of the workshop (15th January, 2021). Ms. Reema Sahini asked Ms. Mamta (Sr. Scientist 'C') to highlight the key features and objectives of DST-CPR, Panjab University, Chandigarh. Ms. Mamta thanked Ms. Reema for collaborating with DST-CPR for

initiating an indispensable event for articulating a complete picture of IPR mechanism in a paradigm manner through appropriate consortium team. She mentioned that this workshop aims to fulfil the three objectives of the center with special emphasis on 3rd objective namely; "Adopt evidence based approaches for identifying and promoting areas for generation of intellectual properties". IPR cover patents, copyrights, trademarks, industrial designs, geographical indicators, layout designs, trade secrets and new plant varieties. Ms. Mamta highlighted brief agenda of i-TTO and FITT. FITT is an industrial interface organization. It was established at the Indian Institute of Technology Delhi (IIT Delhi) as a Registered Society on 9th July 1992. The mission of FITT is to be an effective Interface with the Industry to foster, promote and sustain commercialization of Science and Technology in the Institute for mutual benefits. A dedicated Innovation-Technology Transfer Office (i-TTO) has been established by FITT under BIRAC's National Biopharma Mission. i-TTO shall cater to the north and parts of central region in the country. The aim of i-TTO is to work closely with individual innovators, entrepreneurs, start-ups, and academia and enable commercialization of their innovative ideas and technologies. i-TTO provides a platform to inculcate the essence of research translation, spur Innovation and enable Incubation of technology projects/ startups.

i-TTO provides Services in

• IP protection, IP analytics, IP management
• Technology Development, Technology Acquisition, Adaptation and Technology Transfer;
• Developing linkages with R&D organizations, incubators, industries and others.
• Outreach towards partnerships-technology development and transfer
• Mentoring for capacity building in IP & Tech Transfer and other skill trainings
• Supporting - spin-offs and start-up formation,
• Mentoring to innovators for funding opportunities and regulatory compliance.

Ms. Reema introduced achievements and contributions of Prof. Nirmala while emphasizing her special achievement of being recognized as World Bamboo Ambassador of India and requested her to give the welcome address. Prof. Nirmala appreciated the team work of both the organizations for conducting such as valuable event with amicable collaboration. She thanked Ms. Pooja Bhatia Vasaikar, Chief Manager, i-TTO at FITT, Ms. Reema and prominent experience speakers for making their contributions for this workshop.

Ms. Reema introduced the first speaker of the session, Ms. Divya Kaushik, Scientist, PIC-TISC, Punjab State Council for Science & Technology, Chandigarh to deliver her talk on "Introduction to IPRs".

Ms. Divya Kaushik expressed thanks to Prof. Nirmala for being pro-active for taking things to IPR commercialization. She mentioned about achieving the ultimate aim of "Atma Nirbhar Bharat" by spreading awareness about IPR commercialization. She mentioned that our organization has been very instrumental in IP ecosystem and is integrating its inputs in Punjab and Haryana. It is a DST funded organization, acting as a nodal agency and is attempting to collaborate with various Universities and IPR cells for assisting them in patent filing protocol. She discussed her talk while focusing on following objectives:

(i) Creating awareness is an imperative issue for IPR.

(ii) IPR articulation should be conducted in native language.

(iii) Giving training to women scientists in PIC.

(iv) IP filing in TISC and collaborating with various agencies.

She initiated her talk while highlighting the differences between Invention and Innovation while taking example of a wheel invented by early man. Invention means anew scientific output, e.g. a wheel developed by an early man and Innovation refers to making that invented wheel for public use, example wheels of a car. Following points were discussed in detail by her:

1. Modern concept of ownership while differentiating between tangible property rights (physical objects such as land, household goods, cars) and intangible property rights (IPR). The advantage of intangible over tangible lies in the fact that tangible can be utilized only in certain location for a specified period of time but IPR is a creative mind creation and can be utilized anywhere, irrespective of your location.
2. IPR is not restricted to scientific innovation but any creativity which may be some novel design, symbol, logo, etc.
3. IPRs should be protected and registered for maintaining rights of an institute and for further compliance of the country. This is because an institute ranking depends on its IPR protections. For example, Panjab University, Pharmaceuticals department has a good portfolio and recognition for attracting collaborations for commercialization.
4. Prior art literature helps in planning research for more need driven based.

5. Different forms of IPRS can be registered. Registration of rights through trademarks, copyrights, industrial design, New variety, IC Layout, trade secrets and geographical indicators (GIs). New songs and creative expressions can be filed under copyrights and give longer protection than patents. Trademarks (TM) can protect all sorts of logos, etc and value of TM grows and it becomes asset for the country. Example, Luxor pens, Nike shoes are being registered under TM. Industrial design only protects the outer appearance of the product. Example is mineral water bottle design. Industrial design can be registered initially for 10 years and later can be renewed for 15 years. New varieties include protection of new plant varieties (PPV) acts. This gives premium to the farmers who is protecting them. Trade secrets is an IP which a person or a company can undergo registration. All these IPRs can be filed by a single person or a consortium. But Geographical indicators (GIs) are rights to be filed by a community, example: Banarsi sarees of Banaras, Phulkari of Punjab, etc. GIs helps us in identifying particular community and add product value to it.
6. A single product can have multiple IPRs. For example a parker company pen with a special design has parker as trademark and outer design as industrial design.n
7. A patent agent/ attorney, a nodal agency (e.g. Center for Industry Institute Partnership Program (CIIPP) of Panjab University, Chandigarh, Patent information center (PIC) at Sector-26, Chandigarh, Technology Information Forecasting and Assessment Center (TIFAC): a funding agency are some of the mandatory requirements for patent filing.
8. Once a patent is granted, we forget to re-new the patent but it is imperative step so as to keep it re-enforced.
9. Special emphasis to Patent Act 1970 and Sections 3 and 4 of Indian Patent Act should be made before filing patent application.
10. Interesting patent examples includes: Stapler pins, oil pins, sewing machine pins, Edison bulb example has changed the world, opening cover of Coca-Cola can, accidently invented Indelible ink patented by CSIR-NPL is being used by government during elections.
11. Three ways of filing patent includes: (i) Through PIC/TISC, (ii) Through patent agent/attorney, (iii) By yourself: Physical filing or E-filing.
12. Various forms and fees required for patent filing were also discussed. Example: For institutes Rs. 8000/- is the filing fees and Rs. 20, 000 is the examination fees.
13. Role of Nodal and Government agencies in filing patents

(a) Patentability serach can be done through PIC/TISC, PSCST.
(b) Training session is also offered for obtaining full patent filing training methodology.
(c) Assessing IP portfolio for IPR commercialization.
(d) Conditions for e-filing are updated on their respective websites.

The talk was concluded by Ms. Divya while offering her help regarding IPR filing methodolgy by sharing her email address and taking queries as much as possible.

Ms. Reema thanked the speaker and introduced the speaker of the next session Dr. Kavita Bansal who is a registered patent agent and the founder of Shodh Raksha an IP firm based out in Mohali.

Dr. Kavita Bansal delivered her talk on the topic "Sensitization about patent filling and its maintenance". She introduced the concept and significance of patent while comparing it with real estate property. Following points were added by her in her talk.

1. She mentioned about the legal status achieved after registering IPR which adds value to the innovation. Types of IPR namely; trademarks, copyrights, geographical indicators (GIs) and patents were discussed by her.
2. A single product can have several patents depending on its counterparts, she supported this statement by giving instance of a digital pen constituting multiple parts patented. Scientific principle or abstract theories, discovery of DNA, methods of agriculture and horticultures can be published but can't be patented.
3. Significance of prior art for novelty, inventiveness and industrial applications were highlighted by her to avoid patent rejection.
4. She briefly explained the patent search engines, patent information centers and patent databases required for analyzing the patentability of the work. Examples of interesting patents were demonstrated by her including coco-cola can opener, needle of a sewing machine, which removes the illusion of complex products demands for patent filing.
5. A complete mechanism of patent filing through a flow chart inculcating all the steps of patent filing in chronological order.
6. A complete patent drafting application format was described by her which includes the following steps:
   (i) Title of the invention

(ii) Field of the invention

(iii) Background of the invention

(iv) Objectives of the invention

(v) Summary of the invention

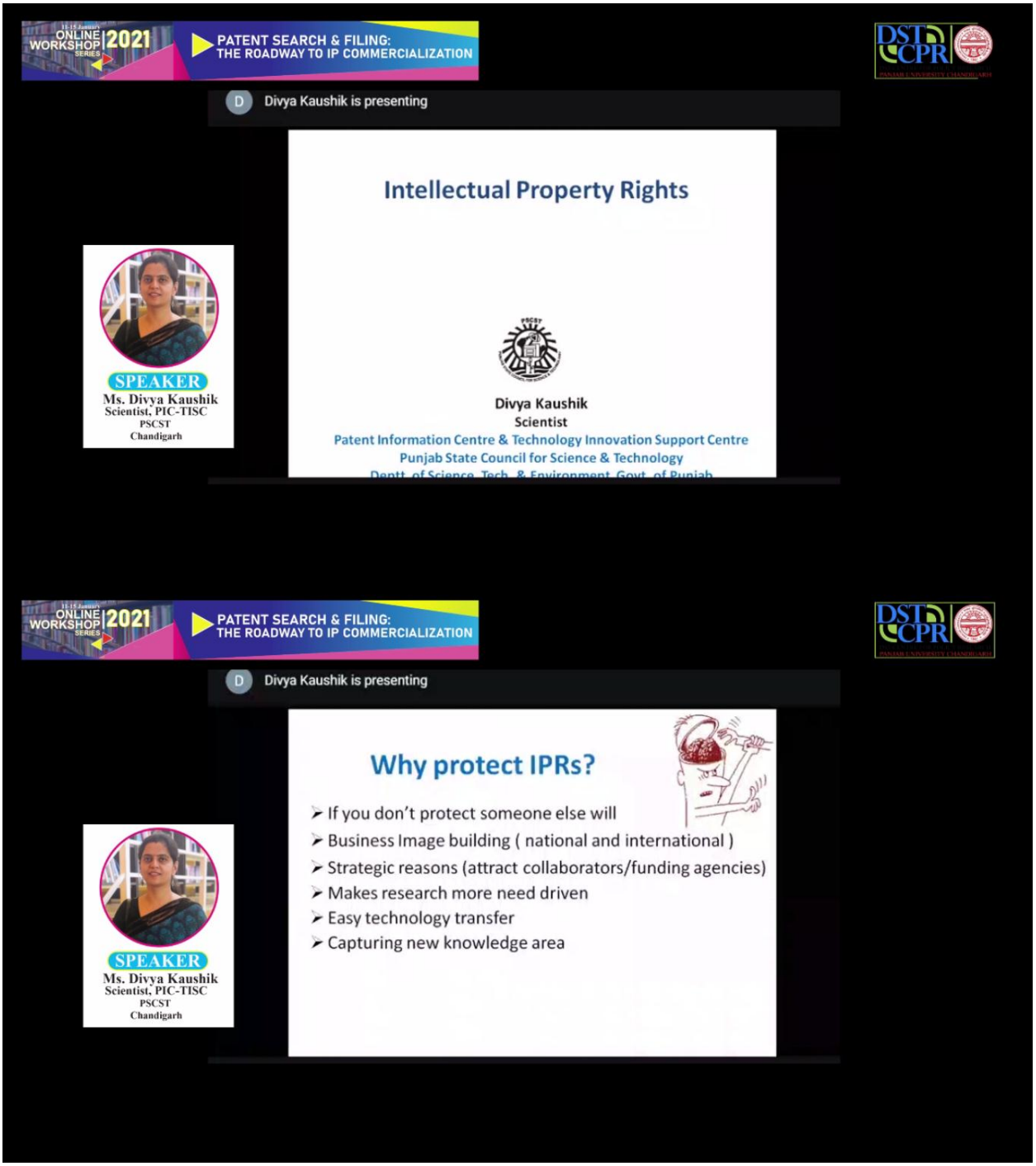
(vi) Detailed description of the invention

(vii) Claims (which is basically the fencing of the patent work where inventiveness lies and hence should be carefully written. It should inculcate the basic novelty and innovation strategy behind the invention).

7. She mentioned that after patent filing, research papers of the innovation and related data can be published.
8. She highlighted the offences and penalities in case of offences.

Dr. Kavita Bansal concluded her discussion while taking queries of the participants. Ms. Reema thanked Dr. Kavita for her valuable talk and covering all necessary steps of patent filing in paradigm approach. She requested Prof. Nirmala to give vote of thanks.

Prof. Nirmala thanked Ms. Divya and Dr. Kavita for delivering interconnected talks describing complete articulate picture of patent filing. Ms. Divya started from the basics of IPR and highlighted the significance of filing patents to amend the ranking of research institutes. Dr. Kavita continued the discussion while briefing the detailed process of patent filing, all mandatory requirements and intermediator steps involved. This session would surely help to enlighten the participants and researchers for patent filing procedure. She expressed her gratitude to i-TTO and FITT tean and DST-CPR center team and Prof. Raj Kumar, our worthy Vice Chancellor for allowing us to conduct an indispensable workshop.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PATENT SEARCH & FILING: THE ROADWAY TO IP COMMERCIALIZATION
DST CPR
Divya Kaushik is presenting
Intellectual Property Rights
Divya Kaushik
Scientist
Patent Information Centre & Technology Innovation Support Centre
Punjab State Council for Science & Technology
SPEAKER
Ms. Divya Kaushik
Scientist, PIC-TISC
PSCST
Chandigarh
ONLINE WORKSHOP SERIES 2021
PATENT SEARCH & FILING: THE ROADWAY TO IP COMMERCIALIZATION
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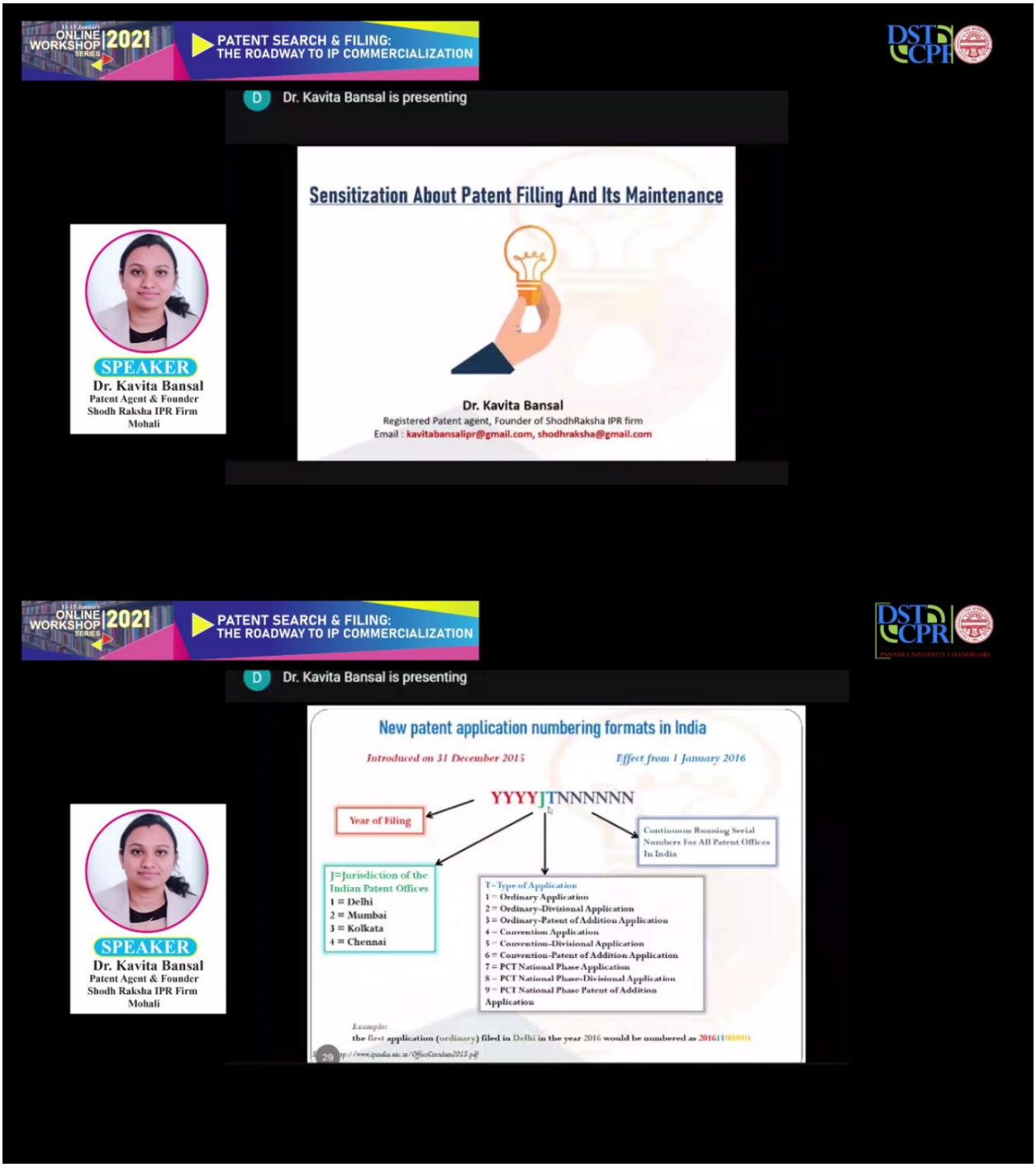
Divya Kaushik is presenting
Why protect IPRs?
If you don't protect someone else will
Business Image building (national and international)
Strategic reasons (attract collaborators/funding agencies)
Makes research more need driven
Easy technology transfer
Capturing new knowledge area
SPEAKER
Ms. Divya Kaushik
Scientist, PIC-TISC
PSCST
Chandigarh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DST CPR
D Dr. Kavita Bansal is presenting
SPEAKER
Dr. Kavita Bansal
Patent Agent & Founder
Shodh Raksha IPR Firm
Mohali
Sensitization About Patent Filling And Its Maintenance
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New patent application numbering formats in India
Introduced on 31 December 2015
Effect from 1 January 2016
YYYYJTNNNNNN
Year of Filing
Continuous Running Serial Numbers For All Patent Offices In India
J=Jurisdiction of the Indian Patent Offices
1 = Delhi
2 = Mumbai
3 = Kolkata
4 = Chennai
T=Type of Application
1 = Ordinary Application
2 = Ordinary-Divisional Application
3 = Ordinary-Patent of Addition Application
4 = Convention Application
5 = Convention-Divisional Application
6 = Convention-Patent of Addition Application
7 = PCT National Phase Application
8 = PCT National Phase-Divisional Application
9 = PCT National Phase Patent of Addition Application
Example:
the first application (ordinary) filed in Delhi in the year 2016 would be numbered as 201611000001
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Minutes of Meeting of 5 Day Online Workshop on 'Patent Search & Filing: The Roadway to IP Commercialization'

Day 2: 12th January, 2021

Organized by

DST-Centre for Policy Research (CPR) at Panjab University, Chandigarh
and
Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology
Transfer (FITT), IIT Delhi

Speakers:

1. **Dr. Deepa K. Tiku, Patent Expert and Practice Lead Biotech Biosciences K&S Partners, Gurugram, Haryana.**
2. **Ms. Reema Sahni, Project Manager, Innovation-Technology Transfer Office (i-TTO), FITT, IIT, Delhi**

The 2nd day of the training workshop on the theme of "Patent Search & Filing" was started with more than 50 participants by Dr. Mansimran (Sr. Scientist D, DST-CPR, Panjab University, Chandigarh) while welcoming all resource persons, participants, researchers, academicians, industrialists and scientists. She briefly highlighted the objective behind today's sessions. The sessions extend the previous day session in which basics of Intellectual Property Rights (IPR) and complete methodology of patent filing were discussed. Present session aims in explaining the post patent filing protocols, including pre-patent and post patent appositions and enforcement in Indian Patent Regime. Moreover, today's session also intends to make our participants learn the mechanism of technology transfer and various intermediates involved in taking lab to market. This will help in sensitizing our researchers to make their valuable research commercialized. The various marketing strategies also need to be inculcated among researchers to add brand value to their inventions and innovations. Dr. Mansimran requested Prof. Nirmala, Coordinator, DST-CPR, Panjab University, Chandigarh to officially welcome today's resource persons, participants and allow to start the sessions. Prof. Nirmala thanked both the teams and speakers for joining for this indispensable event. She motivated the participants and researchers to groom themselves to add

value to their innovative and good quality research through technology transfer and commercialization. It will add value to their work and make it a fruitful source for society.

Dr. Mansimran welcomed the 1st speaker of the session Dr. Deepa K. Tiku, Patent Expert and Practice Lead Biotech Biosciences K&S Partners, Gurugram, Haryana. She is a registered Patent Agent with the Indian Patent Office and an attorney at law. She specializes in the area of Life Sciences, with an emphasis on patent drafting, prosecution and contentious practice, particularly biotechnology and pharmaceuticals as well as biomedical, nanotechnology, chemistry and polymer related inventions. Her Practice also involves advising both domestic as well as International clients on Plant Variety Protection in India as well as Biodiversity Act of India. She also advises on enforcement of patents, freedom to operate, due diligence, technology transfer and licensing. She has been practicing in the field of patent law for more than 15 years with an added experience of about seven years of working in the industry as well as on the research side. She is a named inventor in total of 21 granted patents worldwide and has several publications and articles to her credit. She is also a regular speaker at various IP Fora and works on IP policy related issues as well. She serves as a member of the National Biotechnology Committee of CII, the premier Chamber of Commerce in India.

Dr. Deepa initiated her talk while offering taking queries from audience from time to time as most of the legal statements and words might be unknown to them. She presented her talk in an articulate manner on the topic "Opposition and Enforcement in India". She mentioned that in India, there is no presumption of validity even after patent is granted. Therefore, there is a need of appropriate patent drafting process with suitable claim points and prior art search. She described the following key features during her talk:

1. Patents are supposed to be made available for public domain once they are granted and have lifetime of 20 years. Therefore, there are **pre-appositions (before patent granting)** and **pro-oppositions (after patent grant)** by the public domain. Pre-grant oppositions involve oppositions by any person and has a wide window till patent is granted whereas post-grant oppositions constitute oppositions from interested persons relevant to the field area of the patent.
2. Appositions require filing of revocation petition by interested person before expiry of post grant opposition time (usually within one year). Revocation opposition has been introduced in

2005 after the amendment of Patent Act in 2005. Revocation petition may be filed before the Intellectual Property Appellate Board (IPAB) at any time after grant of the patent.

3. Pre-grant oppositions can be misused by the 3rd party and competitors by filing multiple oppositions, therefore there are significant case laws and statistics pertaining to pre-grant opposition.
4. There is no limit of number of oppositions filed and is mandatory for an inventor to respond to all the queries, objections and oppositions.
5. The three steps of Pre-grant opposition include: (i) Opinion of Controller in which the notice of opposition is issued to the patent applicant by the controller, (ii) Reply along with evidence by the applicant, (iii) Appointment of "Hearing" followed by controller's decision ordinarily within one month of such proceedings. Practically, decisions may be received within a year or more.
6. The three steps of Post-grant proceedings include: (i) Filing of notice of opposition with controller of patent office, (ii) Patentee reply along with evidence (if any) within 3 months of the date of notice and (iii) Constituted opposition board make recommendations and appoint hearing followed by controller's decision within one month.
7. She also discussed the various acts amounting to patent infringement and exceptions to it like The Bolar exemption, Parallel Imports, Government use, Research exemption.
8. She also demonstrated the complete protocol of hierarchy of courts in patent suits for filing patent appositions. She highlighted that albeit special patent courts are not there in India, but still many technical inputs are integrated in patent judiciary matters.
9. Interim and permanent relief to the patentees were mentioned by her to protect their IPR and stop 3rd party or competitors for misusing and marketing similar products patented by the original inventor and patent filer.
10. She also mentioned about IP litigation and emphasized that most of the pharmaceutical companies face many patent litigations.

Dr. Deepa concluded her presentation and discussed queries of the participants regarding various legal complexities involved in post-patent opposition process and their handling strategies. Dr. Deepa offered her further discussions while sharing her electronic address with the participants. Dr. Mansimran thanked the speaker for enlightening our audience with pre and post patent opposition mechanisms, respectively. Dr. Mansimran welcomed our 2nd speaker of the session Ms.

Reema Sahni, Project Manager, Innovation-Technology Transfer Office (i-TTO), FITT, IIT, Delhi to deliver her valuable talk on the topic: Technology transfer.

Ms. Reema initiated her talk while highlighting the significance of Technology transfer in establishing an innovative system which adds a brand value to academic or a research institute. This is because a ranking of an institute or organization depends on number of patents filed, granted, copyrights, trademarks, technology transfer and commercialization. She discussed the following significant points during her presentation:

1. Technology transfer opens a new door for revenue generation for an academic institution and provide new ways of creating employment while initiating start-ups. The list of technologies that gets transferred includes: Research data, technology, accessories like software, biological material, patent, trademark, copyright filed for that technology can also be transferred.
2. The stakeholders involved in technology transfer constitutes technology developers like inventors, research institute or organization, technology seekers/ buyers like companies or industrialists and technology supporters. Technology supporters bridge the gap between technology developers and technology seekers and play a vital role for technology transfer and its commercialization.
3. The steps of technology transfer inculcates (i) Patentability assessment to get information about the novelty of the technology and (ii) Marketing of technology which is imperative to add brand value to a product.
4. She discussed the requirement of technology assessment under following sub points:
   (i) To work on gap areas of technology.
   (ii) Understanding key features of technology to determine key routes for its commercialization.
   (iii) Market potential of the technology is required to be taken account.
   (iv) Buyers of the technology who can do marketing of their technology.
5. Steps of technology assessment
   (i) Determination of technical strength.
   (ii) IP strength
   (iii) Market strength
   (iv) Maturity level of technology and its industrial application.

(v) Novelty and inventive step can be done by patent search engine.

6. She emphasized on marketing of the invention while highlighting the role of social media like linked in and other Science, technology and innovation sites and mentioned following modes of marketing for technology:
   (a) One to one contact for marketing
   (b) Direct contact with companies working in the same domain.
   (c) Marketing technology in an exhibition but while preserving the confidential information.
   (d) Participation in conferences and other educational events.
7. She reported her case study of Kawach mask which was a product developed by IIT Professor and his team. I-TTO did commercialization for this technology and now this IIT team is generating revenue from it.
8. She emphasized that only robust, incremental and economical significant technologies can be transferred. Expertize is required for technology transfer to avoid any spurious myths.
9. She concluded her talk while mentioning various Do's and Don'ts of technology transfer

   Do's

   (a) Vision should be clear regarding agreement.
   (b) Motive behind technology transfer should be transparent.
   (c) Extent of transfer: usability of technology and tenure of technology transfer should be clarified in well advance.
   (d) Milestone payment and royalty amount should be mentioned in license agreement.

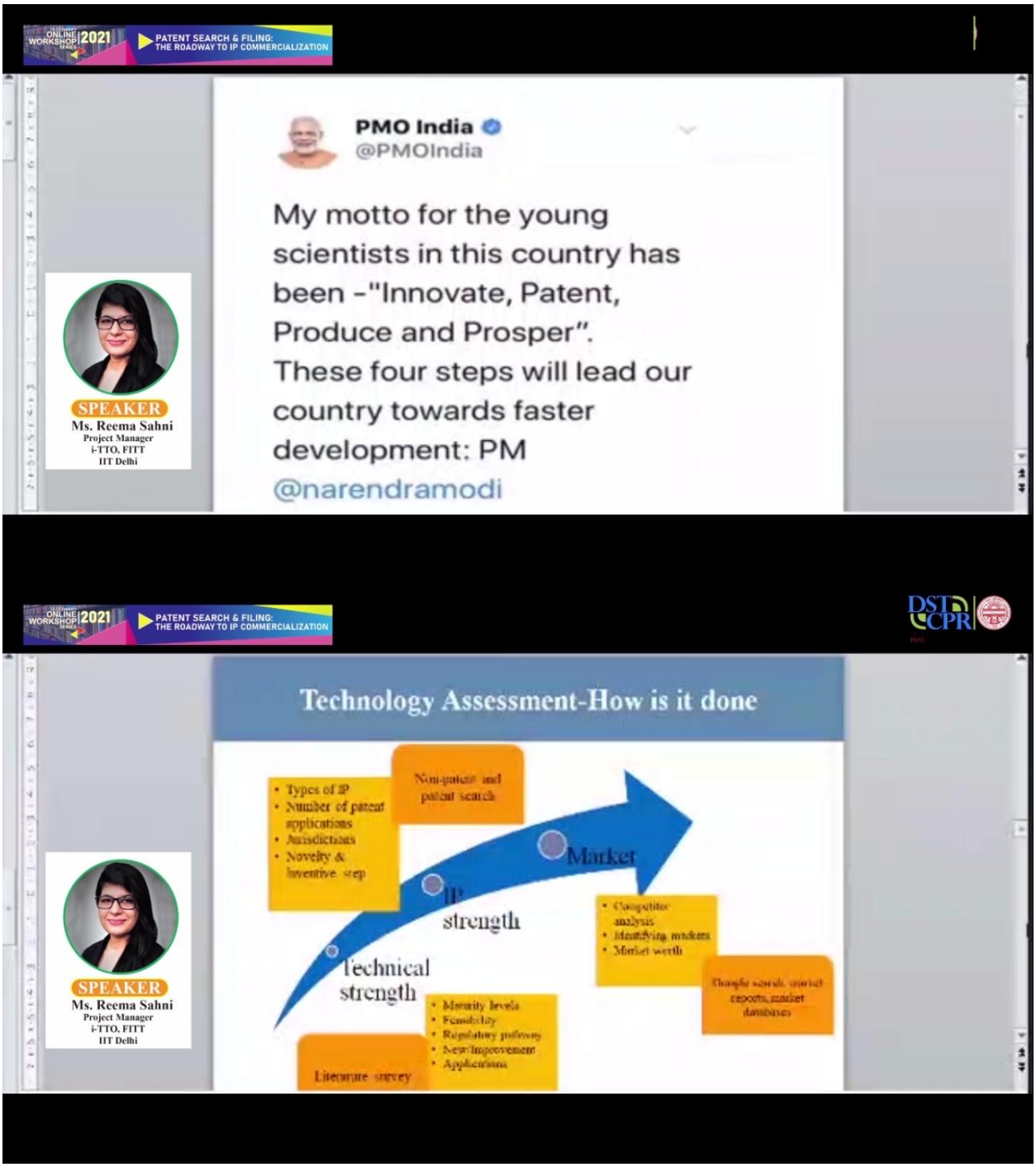
   Don'ts

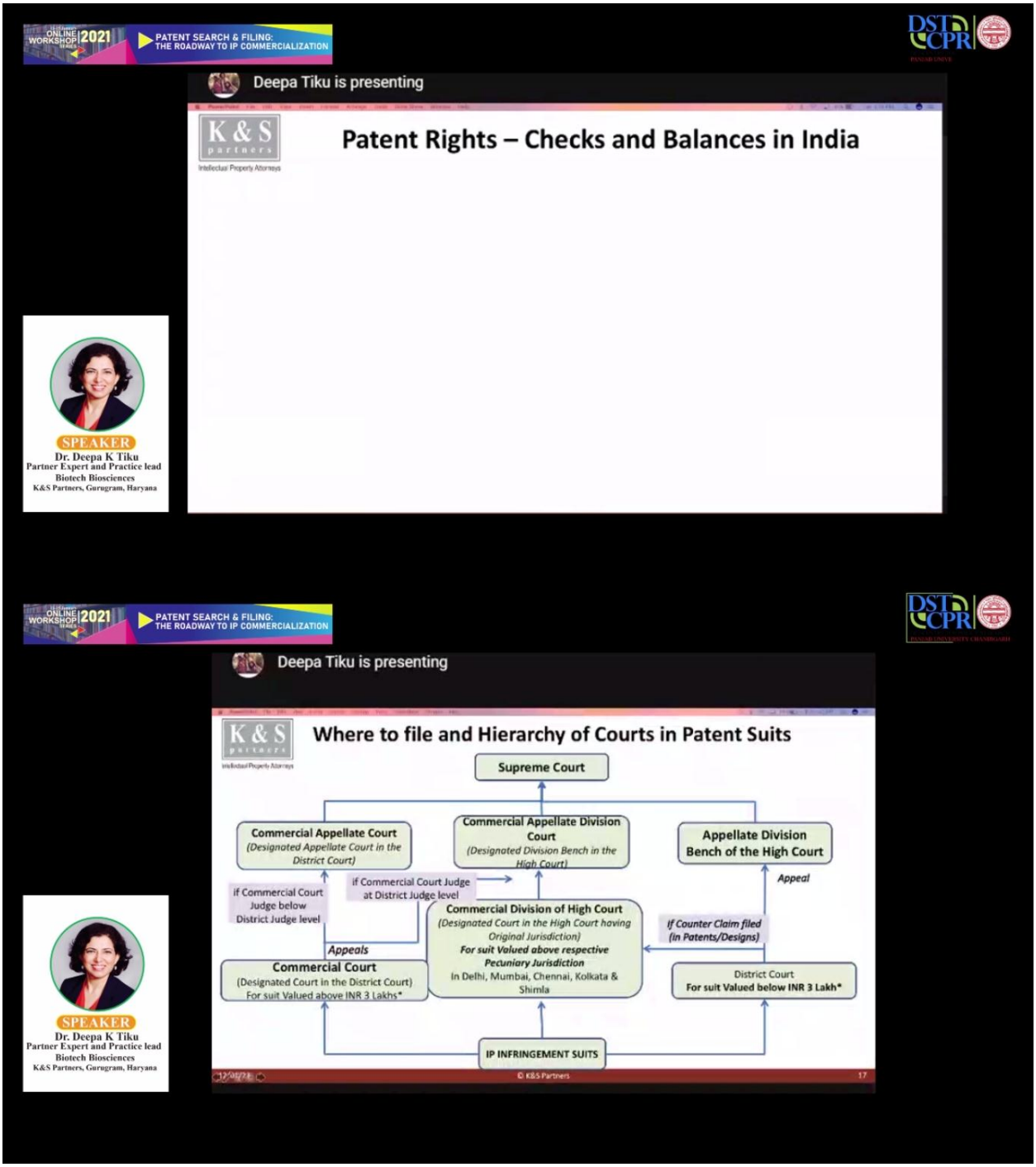
   (a) Lack of confidentiality terms
   (b) Upfront payment, milestone payment and royalty amount.

Dr. Mansimran thanked both the speakers and proceeded with question/answer session and taking queries from the participants and had a short discussion with the speakers regarding same.

Prof. Nirmala concluded the session while presenting vote of thanks to both the speakers and summarized the significance of their talks. She added that technology is not transferred to the companies, it will not be of economic value and a technology adds up its value if taken up by

right hands. Moreover, as mentioned by the speakers, generation of lot of revenue from the developed technology surely ignite the curiosity of the researchers.

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Deepa Tiku is presenting
K&S partners
Intellectual Property Attorneys
Patent Rights – Checks and Balances in India
SPEAKER
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Intellectual Property Attorneys
Where to file and Hierarchy of Courts in Patent Suits
Supreme Court
Commercial Appellate Court
(Designated Appellate Court in the District Court)
Commercial Appellate Division Court
(Designated Division Bench in the High Court)
Appellate Division Bench of the High Court
Appeal
if Commercial Court Judge below District Judge level
if Commercial Court Judge at District Judge level
Commercial Division of High Court
(Designated Court in the High Court having Original Jurisdiction)
For suit Valued above respective Pecuniary Jurisdiction
in Delhi, Mumbai, Chennai, Kolkata & Shimla
If Counter Claim filed (in Patents/Designs)
Appeals
Commercial Court
(Designated Court in the District Court)
For suit Valued above INR 3 Lakhs*
District Court
For suit Valued below INR 3 Lakh*
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SPEAKER
Dr. Deepa K Tiku
Partner Expert and Practice lead
Biotech Biosciences
K&S Partners, Gurugram, Haryana

Minutes of Meeting of 5 Day Online Workshop on 'Patent Search & Filing: The Roadway to IP Commercialization'

Day 3: 13th January, 2021

Organized by

DST-Centre for Policy Research (CPR) at Panjab University, Chandigarh
and
Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology
Transfer (FITT), IIT Delhi

Speakers:

3. **Ms. Komal Sharma, Founder and Director of TT Consultant.**
4. **Mr. Pranav Sharma, Chief Marketing Officer (CMO) of XLPAT labs**

The 3rd day of the training workshop on the theme of "Patent Search & Filing" was started with more than 60 participants by Ms. Mamta Bhardwaj (Sr. Scientist C, DST-CPR, Panjab University, Chandigarh) while welcoming all resource persons, participants, researchers, academicians, industrialists and scientists. She briefly highlighted the objective behind today's sessions. The objective behind today's session was to understand the significance of Prior art search using patent documents and NPL and acceleration innovation through artificial intelligence. Moreover, as in our previous sessions, we had studied the detailed mechanisms of patent filing, granting, technology transfer, oppositions and reinforcement laws, the present session aims to understand the various marketing strategies, software and companies associated with Intellectual Property rights consultancy. The expectation of companies from the inventors and institutes while assisting them in for product launching, competitor benchmarking and accelerating their innovations through artificial intelligence (AI). For this purpose, two renowned speakers from TT consultants and XLPAT labs delivered their talks and demonstrated their complete protocol related to the software and various packages. Role of XLPAT labs for automated patent search engines, various amended technologies utilized by them for doing prior art search using patented and non-patented applications was discussed in detail.

Prof. Nirmal officially presented the welcome address and highlighted the key features of today's session and explained its interconnectivity with the previous sessions. She gave brief overview of the field expertise of the resource persons and their specialized skills.

Dr. R. Ridhi introduced the first speaker of the session Ms. Komal Talwar Sharma who is the founder and Director of TT consultants (TTC), which is a leading international intellectual property and technology consulting and analytics firm. TTC is ranked number 1 Patent Search Company in India by the Japanese External Trade Organization (JETRO). Ms. Komal Sharma owns prestigious membership of "World Economic Forum", which is basically the center for the 4th Industrial revolution, San Francisco. She also stands among the 18-member task force team set up by the Ministry of Commerce and Industry, GoI and Confederation of Indian Industry (CII) council. She is a board member and also an ambassador at Girls X Tech, a "not for profit" organization based in Punjab, India with the goal of connecting females with technology through tech-education programs based on skill development and community-awareness.

Ms. Komal Sharma initiated her talk while highlighted the significance of Faster, Automated and more Intelligent Technologies in current competitive world. She mentioned that problem with current scenario of technology search and analysis is lacking of a common platform for global patents and NPL searching, multiple databases and versatile languages of technology documents. These factors hampers in the development of niche environment for researchers and inventors to undergo efficient patent searching and prior art search. Therefore, while discussing the positive parameters available in their company for prior art search using patent documents and NPL, she discussed following key features during her presentation:

1. XLPAT offers World's largest Patent and Non-Patent Search and Analytics Platform for the researchers inculcating around 100 million patent documents with non-patent literature (which helps to do prior art search before initiating a project), various litigations, examination reports, corporate revenue and subsidies.
2. They provide automated patent search engines through artificial intelligence, machine learning, natural language processing, Watson/Google/Bert and big data technologies. This helps in reducing the manpower and mechanical effort of the researchers in involving in complexity of patent search engines among scattered and non-paradigm data. Consortium of data under same umbrella develop enthusiastic approach to researchers to do complete prior art search.

3. She discussed about the significance of AI as an accelerating pedal having the amenability to ramp up the current pace of innovation. In this competitive world, Organizations/Universities have to radicalize their old workflows and processes to be in the race.
4. She briefly explained the role of XLPAT in enabling every stakeholder in all companies/universities to be able to convert idea-innovation into IP. This is because their company does business with a special and productive purpose.
5. Demonstration of XLPAT.com software to do evaluation using novelty checker based on AI and auto-generated report was done by her. She also mentioned about XLPAT's Portfolio Investigator (PatDigger) which predicts high quality patents in the portfolio with automated product tracking and intelligent dashboards with alerts.
6. AI technologies can assist in R&D idealization and commercialization. R&D idealization involves XLPAT Corpus constituting 3 billion related concepts, a novelty checker utilizing AI based instant idea evaluation and technology intelligence and R&D intelligence reports. For commercialization, AI assists in identifying potential licensees and Automated Evidence of Use Search.
7. Various search tools available in their software for patent search like Patent Searching & Prosecution, Data Analytics, Commercialization and Patent Litigation were described by her with proper demonstration.
8. Discussion about various problems with their solutions regarding value Proposition was also taken by her. The problems faced among big companies and universities are difficulties in evaluating countless data to generate innovative ideas depending on demand and supply of the society. The solution provided by her were to get machine suggested inventive concepts and Instant idea evaluation by first pass screening.
9. Social impact of AI on universities includes profit with the purpose and generating revenues from the high quality patents and internal innovation processes.
10. Advantaged of novelty checker includes:
    (a) Semantic search enabled to automatically understand the context of idea and searching overlapping patents/Non-patents closest to our idea.
    (b) Proprietary Algorithm developed with 11+ years of experience which has the capability to mimic the expert searcher and automate the standard workflow of patentability searches.
    (c) Analyze work in the same space using Graphical and Visual representation.

(d) Generate Automated Patentability Reports

(e) User can supervise the machine to optimize output.

11. Brief demonstration of Novelty checker NLP search engine was also done by her. Their classification model is an ML-based model which analyzes key features of the invention and understands the technical content of the invention. Based on the technical keywords, machine suggests relevant classifications schemes representing the key technology fields. Key technology fields ranked as per the relevance to the disclosed invention are suggested to the user for supervision.
12. Key features of Novelty checker include:
    (a) Novelty Checker's ideation feature generates new ideas.
    (b) The machine suggests new inventive concepts that can be combined with the inventor's idea to improve the idea strength.
    (c) An interactive dashboard that displays idea strength, idea demographics (such as top companies, patent grant ratio and top country), key feature analysis and machine suggested inventive concepts.
    (d) Machine suggested concepts helps in improving your idea

The talk was concluded by Ms. Komal Sharma while mentioning the significance of patent search engines for research organizations, academic institutes and big companies to have high quality commercialized products in today's competitive world.

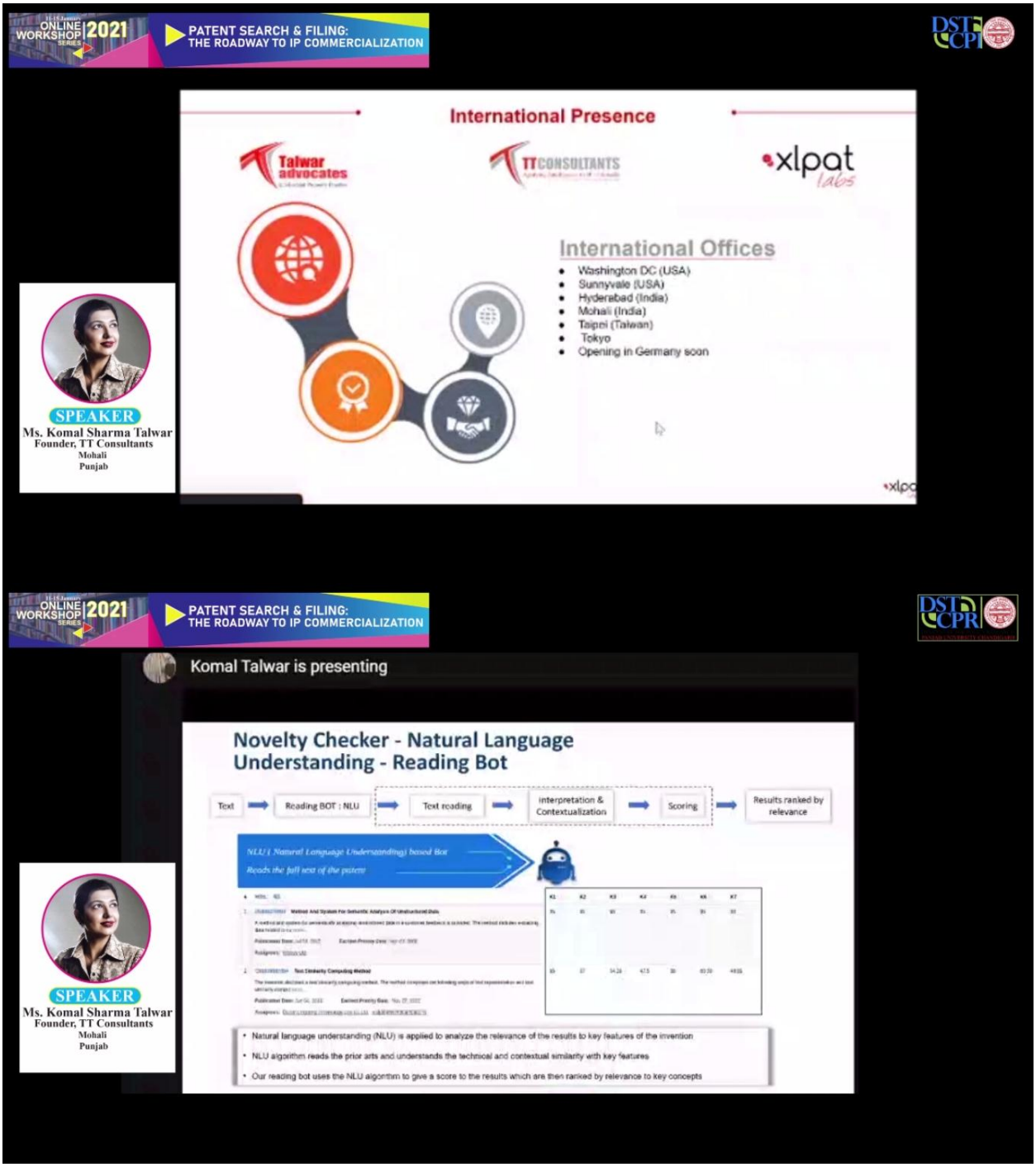
Ms. Mamta discussed the queries of the audience with the speaker and Prof. Nirmala thanked the speaker for her enlightening demonstration for the participants and requested her to have a physical demonstration and training workshop for Panjab University researchers in near future.

Dr. R. Ridhi introduced the 2nd speaker of the session Mr. Pranav Sharma, who is the Chief Marketing officer (CMO) of XLPAT labs. XLPAT is a leading international artificial intelligence platform for technology analytics. Mr. Pranav Sharma assists his clients associated with R&D for disseminating their ideas and sell their IP. His specialties include patents, databases, building intelligent algorithms, product development strategy, corporate strategy, IP consultant. He demonstrated the complete protocol and methodology of XLPAT software and novelty checker and evaluation procedure. The aim of his talk was to completely demonstrate practically the ideas of accelerating innovation through artificial intelligence presented by Ms. Komal Sharma.

Mr. Pranav Sharma initiated his talk while mentioning the need of Accelerating innovation through AI. He said that to keep pace, business innovation cycles are shrinking faster than ever before, mirroring customer expectations and fast changing preferences. Today, innovation isn't just a competitive advantage – it's a necessity. Although, people have countless ideas, however turning those ideas into innovation is a painful and hectic process. Currently, to find the Novelty of one's ideas needs involvement of an expert, making it an expensive and time-consuming process which everyone cannot afford. So, the challenge is to disintermediate the patent information process by introduction of some AI technologies, where AI can mimic the behavior of an expert searcher by automating the standard workflow of Novelty checking process.

He demonstrated the complete Novelty checker software and highlighted the case study of an interesting example of robotic bees utilized for artificial pollination. He also mentioned that while making interconnected networks and making effective communication AI systems can be enhanced systematically in paradigm manner. He emphasized on protecting valuable ideas through marketing and as per the acceptance of market needs. He also explained the pain points of patent search while taking case studies of IIT Madras. He organized an interactive session with the participants while demonstrating his XLPAT software for Novelty checker. Participants discussed their queries regarding the patent search engine and the talk was more of an interactive session with practical demonstrations.

Ms. Mamta took the final question/answer session after completion of the session and Prof. Nirmala thanked him for such a valuable demonstration session. She also requested to make this XLPAT window accessible to Panjab University researchers for a trial demo. This will help them to practically implement the training session taken in today's session. Mr. Pranav Sharma showed full cooperation for the same and assured her to make it possible shortly in due course of time. Ms. Reema Sahni, Project Manager, Innovation-Technology Transfer Office (i-TTO), FITT, IIT, Delhi also thanked the speakers and Prof. Nirmala for the wonderful training session conducted today. The session was concluded with official vote of thanks by Prof. Nirmala and Ms. Reema Sahni.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Opening in Germany soon
SPEAKER
Ms. Komal Sharma Talwar
Founder, TT Consultants
Mohali
Punjab
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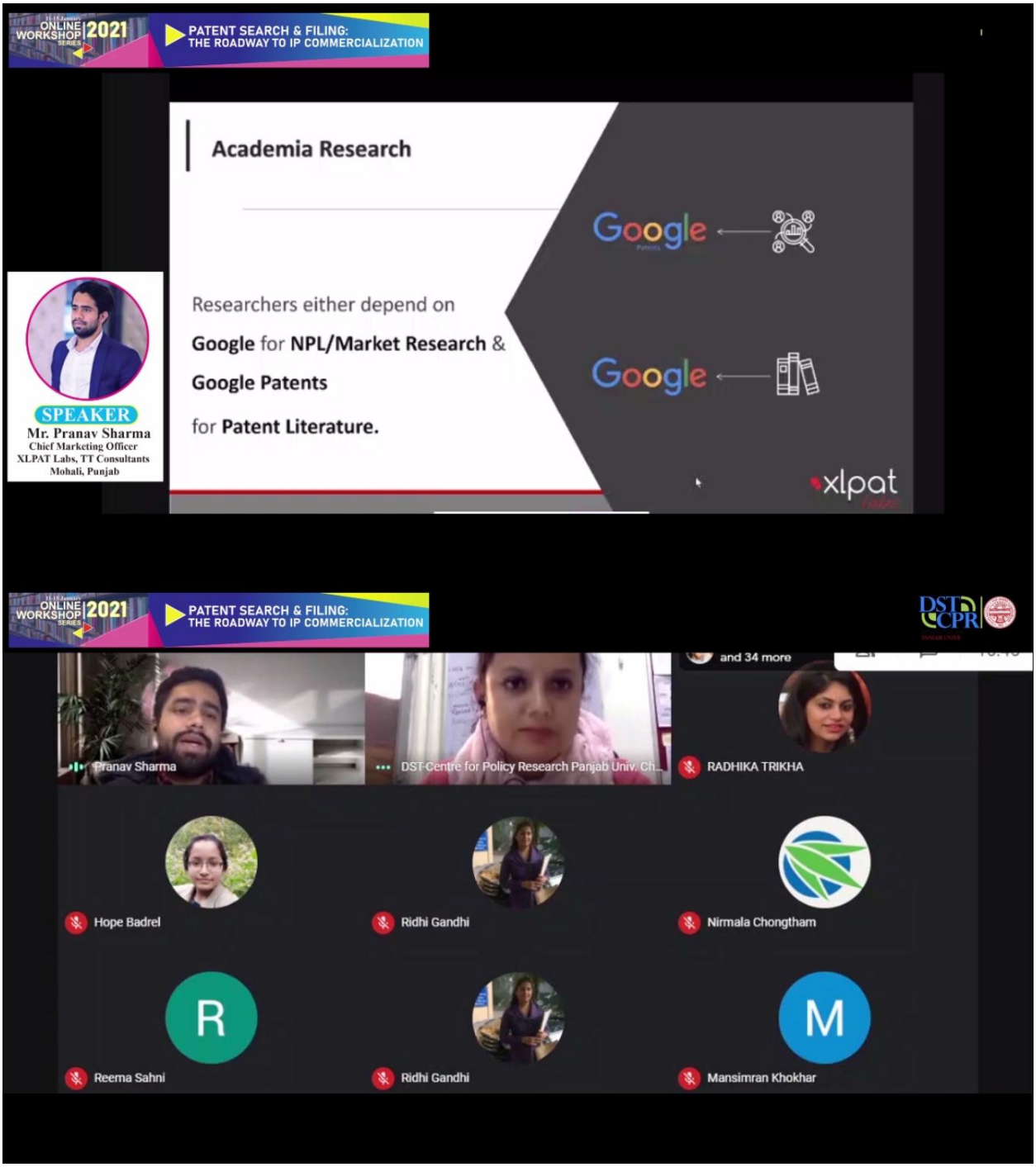
Komal Talwar is presenting
Novelty Checker - Natural Language Understanding - Reading Bot
Text
Reading BOT : NLU
Text reading
interpretation & Contextualization
Scoring
Results ranked by relevance
NLU (Natural Language Understanding) based Bot
Reads the full text of the patent
Natural language understanding (NLU) is applied to analyze the relevance of the results to key features of the invention
NLU algorithm reads the prior arts and understands the technical and contextual similarity with key features
Our reading bot uses the NLU algorithm to give a score to the results which are then ranked by relevance to key concepts
SPEAKER
Ms. Komal Sharma Talwar
Founder, TT Consultants
Mohali
Punjab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SPEAKER
Mr. Pranav Sharma
Chief Marketing Officer
XLPAT Labs, TT Consultants
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Hope Badrel
Ridhi Gandhi
Nirmala Chongtham
R
Reema Sahni
Ridhi Gandhi
M
Mansimran Khokhar

Minutes of Meeting of 5 Day Online Workshop on 'Patent Search & Filing: The Roadway to IP Commercialization'

Day 4: 14th January, 2021

Organized by

DST-Centre for Policy Research (CPR) at Panjab University, Chandigarh
and
Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology
Transfer (FITT), IIT Delhi

Speakers:

5. **Ms. Pragati Aggarwal, Sr. Project Officer, Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology Transfer (FITT), IIT Delhi**
6. **Dr. Rahul Kapoor, Founder, Turnip Innovations Mumbai, Maharashtra**

The 4th day of the training workshop on the theme of "Patent Search & Filing" was started with more than 60 participants by Dr. Radhika Trikha (Sr. Policy Fellow, DST-CPR, Panjab University, Chandigarh) while welcoming all resource persons, participants, researchers, academicians, industrialists and scientists. She briefly highlighted the objective behind today's sessions. The aim of today' session was to have an awareness and understanding of the various patent search engines (freely accessed and paid search engines). It will allow the researchers to do the complete prior-art search before initiating a research project as per the demand of the market and society. For this purpose, today's session involved two renowned speakers working in the patent search regime and they discussed the complete patent search engines and demonstrated their complete methodology and their functioning. Dr. Radhika requested Prof. Nirmala (Coordinator, DST-CPR, Panjab University, Chandigarh) to officially present the welcome address to the resource persons and participants. Prof. Nirmala welcomed all the participants and speakers and highlighted the brief objectives of today's session. Ms. Sukriti Paliwal (Scientific Officer, DST-CPR, Panjab University, Chandigarh) introduced the 1st speaker of the session Ms. Pragati Aggarwal, Sr. Project Officer, i-TTO, FITT, IIT Delhi. She evaluates inventions, conducts patentability assessments,

interact with faculty at IITD for potential IP cases, carry out technology assessment, and other IP related tasks like IP guidance to inventors, handling first Examination Reports etc.

Ms. Pragati Aggarwal initiated her talk while emphasizing the significance of patent search engines. She mentioned that patent search is conducted to understand how novel inventions are different from the one available in public domain. Instead of going directly into the complex, expensive and cumbersome process of patent filing, appropriate prior art search is imperative before initiating a research and filing a patent. This is because market value of our technology can be determined by the market value of existing technologies. For this purpose, i-TTO is helping innovators to do patent searchers at nominal prices. She discussed following points in her presentation:

1. Types of databases for patent searching includes:
   (a) Free or open databases
   (b) Paid databases
2. Various free data bases and their demonstration and operation mechanism were discussed by her: Examples include,
   (i) inPASS (Indian Patent Office) in which search is limited to Indian applications and granted patents
   (ii) ESPACENET (European Patent Office) which includes worldwide information.
   (iii) USPTO (US Patent Office) in which search is limited to US applications and granted patents.
   (iv) PATENTSCOPE involves worldwide search.
   (v) GOOGLE PATENTS: also involves worldwide search.
3. The searchers can be made of both patents and non-patent literature. Non patent literature includes research paper publications, conference proceedings, abstracts, etc. It helps in getting an overview of the current search being done and being updated with the current research to plan up with the next innovative step.
4. Searches provided by inPASS includes Application date, Title, abstract, Patent number, Application name, Applicant address, Applicant country and many more.
5. ESPACENET helps to search the worldwide research and therefore inculcates patents of native languages of specific country. This patent search engine helps us to translate a particular language, e.g. French, German, Korean, etc. It inculcates more than 95 million patent

documents to intimate the searcher about the similar patents filed in other countries. Legal status information is also present in this database that allows to determine the force of patent in the countries.

6. The various searchable fields in the database includes Application number, Priority number, Publication number, Publication date, Inventor details, Applicant, Title, abstract, description, claims and citations.
7. Bibliographic information page is the front page of any patent document and includes inventor name, Application details, Classification, Application number, Priorities by, Published as and an abstract.
8. USPTO provides three different interfaces:
   (i) Public pair which helps to gain access to patent document using application number, PCT number, publication number or patent number.
   (ii) Patent full text and Image database (PaFT) I which by entering keywords in Term 1 and Term 2 searches can be done.
   (iii) Patent scope database provided by WIPO and it provides access to International Patent Cooperation Treaty (PCT) applications in full text format on the day of publication. Access is also allowed to the patent documents of participating national and regional patent offices.
9. Google patents are the most user friendly freely available databases. Google patents have particularly included non-patent literature to have more awareness about research. Google patents indexes full text documents from various patent offices like United States, Europe, Japan, China, WIPO and Canada. The searchable variables of Google patent include Search terms, Date, Assignee and inventor. The searches can be further classified as: Patent Office, Status (granted/applied), Type (Patent/Design).
10. The pros and Cons of free databases include:
    (i) Advantage if zero subscription
    (ii) Disadvantages include:
        (a) It cannot be guaranteed that the data is up-to-date.
        (b) It does not provide complete coverage in few cases, example, some image, text or table might be missing.
        (c) There is absence of user friendly platform

(d) There are less chances of hitting exact literature

11. Ms. Pragati concluded her talk while giving tips and tricks for the participants. She mentioned the use of brainstorm keywords to describe an invention. This is because proper synonyms are required to do proper prior-art search. Utilization of forward and backward cross reference search related with citations to be taken account while searching. The research should be expanded beyond patent databases.

While concluded her talk, she gave a short demonstration of Google patent search for the participants.

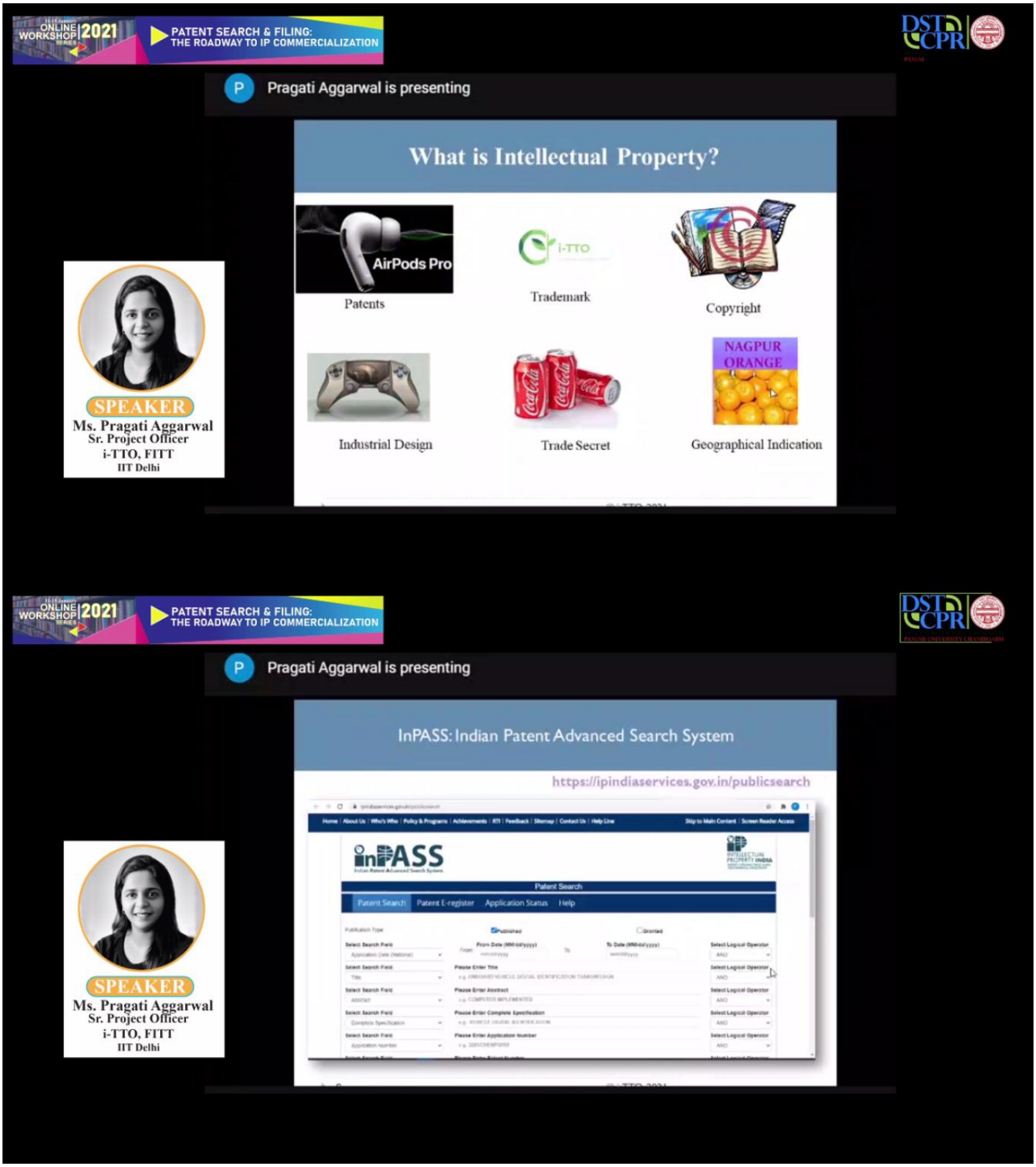
Ms. Sukriti Paliwal thanked the speaker for the wonderful patent search engines demonstrations while highlighting their significance. Ms. Sukriti introduced the 2nd speaker of today's session Dr. Rahul Kapoor, Founder, Turnip Innovations Mumbai, Maharashtra. He is an Innovator and entrepreneur with more than 11 years' experience in business leadership in all aspects of business formation, operation, finance, and management. He is also a visionary product developer with deep education in research and analytics. He serves as an effective communicator and motivator who identifies and leverages assets in teammates to reach organizational goals.

Dr. Rahul Kapoor initiated his talk while highlighting the patent filing trends of top 5 countries of the world and imperative requirement to understand the lacking of India in filing and granting patents. India is filing around 56, 000 patents every year and Council of Scientific and Industrial Research (CSIR) is among 14th position in filing patents. But this number is 30 times less than Chinese Patent Office filings. He emphasized that innovation is very closely related to the economic growth and how patent information can be utilized for technology management. He demonstrated the technology S-curves utilized for depiction of technology lifecycle and constitutes emergence, growth, maturity and decline.

1. The various motives to file patents include:
   (i) Gaining exclusive rights over an innovation.
   (ii) Blocking competitors from entering their technological domains.
   (iii) Forearming against lawsuits.
   (iv) Gain time for evaluation.
   (v) Increasing Bargaining power.

2. He explained how patents are helpful to enhance the reputation of an institute while giving example of a top company in the field of Bio-ethanol.
3. He mentioned the working principle of Patent infringement and emphasized that the truth lies in the patent claims as they are intangible. This is because claims define the boundaries of exactly what is protected by the patentee. The two types of claims include:
   (i) Independent claims which are standing alone and defines the broadest scope of an invention.
   (ii) Dependent claims which always refer to another claim (independent or dependent) and provide further particulars or limitations.
4. He demonstrated an exercise of Patent claims under the following headings:
   (i) To lookup the patent claims of one of Facebook's highly cited patent "US2011202531" in espacenet.com or patents.google.com.
   (ii) What is patent about?
   (iii) How many claims are there?
   (iv) How many are independent claims and how many are dependent?
5. He briefly highlighted about the forward and backward citations which demonstrate an interesting was to search patents.
6. He concluded his talk while taking question and answer session from the participants.

Dr. Radhika thanked the speaker for the demonstration and requested Ms. Reema Sahni, Project Manager, i-TTO, FITT, IIT, Delhi to give concluding remarks. Ms. Reema thanked both the speakers and summarized their talks in brief. Prof. Nirmala gave an official vote of thanks to the resource persons, participants and organizers for conducting wonderful session on patent search engines. She further added that India is lacking in patents regimes in comparison to other countries on account of varied education system in India. She mentioned that in other countries innovation technology, evaluation and its significance is taught to the students even in their college tenure. However, in India, current students are unaware of these innovation strategies even in their doctoral degrees as there is no such hand-holding for sensitizing them about Patent searching. Therefore, this was the main objective for initiating this training workshop so as to provide integrating expert time in patent regimes to assist the researchers of Panjab University for patent filing, technology transfer and innovative ideas. Prof. Nirmala concluded the session while thanking each participant of the session.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Sr. Project Officer
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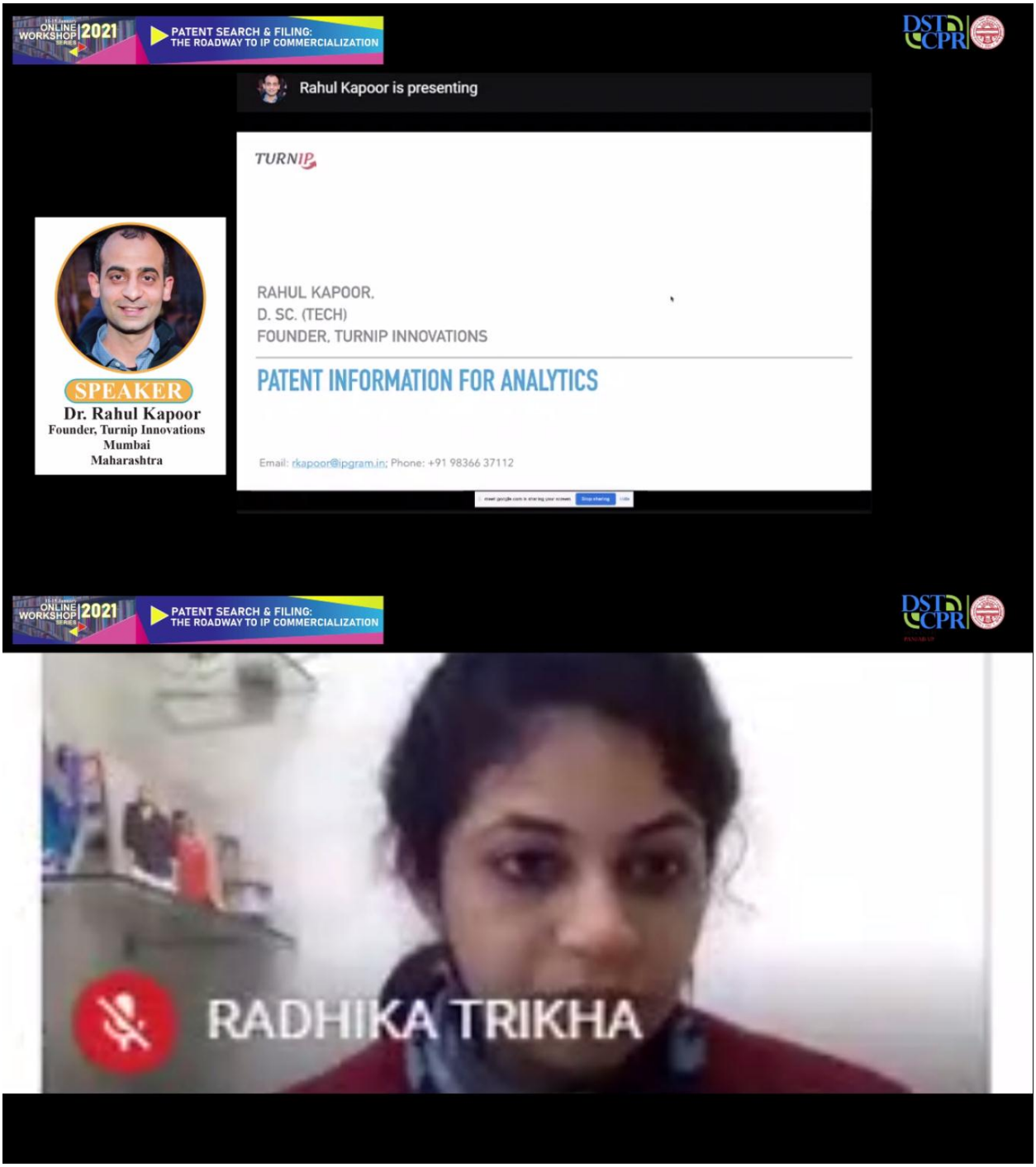
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SPEAKER
Dr. Rahul Kapoor
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Mumbai
Maharashtra
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RADHIKA TRIKHA

Minutes of Meeting of 5 Day Online Workshop on 'Patent Search & Filing: The Roadway to IP Commercialization'

Day 5: 15th January, 2021

Organized by

DST-Centre for Policy Research (CPR) at Panjab University, Chandigarh
and
Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology
Transfer (FITT), IIT Delhi

Speakers:

Ms. Pragati Aggarwal, Sr. Project Officer, Innovation-Technology Transfer Office (i-TTO), Foundation for Innovation and Technology Transfer (FITT), IIT Delhi conducted Quiz session for the participants of the 5-day training workshop on 'Patent Search and Filing'

The concluding day of the training workshop on the theme of "Patent Search & Filing" was started with more than 40 participants by Ms. Mamta Bhardwaj (Sr. Scientist C, DST-CPR, Panjab University, Chandigarh) while welcoming all the participants, researchers, academicians, industrialists and scientists. She briefly highlighted the objective behind today's session. The aim of today' session was to have an interactive session with the participants and getting a feedback from them regarding their experiences during learning sessions during the workshop. Quiz session was taken up by Ms. Pragati Aggarwal, Sr. Project Officer, i-TTO through Google chrome based form. There were 20 questions each carrying 5 marks each and 25 minutes' time duration was set for the participants to answer the questions. More than 35 participants responded to the quiz questions. After completion of the quiz Ms. Mamta thanked the participants and motivated them to keep updated with the patent research regimes and the lessons learnt during this training workshop. Ms. Reema Sahni Project Manager, i-TTO, FITT, IIT, Delhi gave the concluding remarks while summarizing the objectives of the workshop and the agenda of organizing quiz was to take feedback from the participants regarding the workshop. She specially thanked Prof. Nirmala, Coordinator, DST-CPR, Panjab University, Chandigarh for being pro-active and motivating her

team to organize such an indispensable event. She requested Prof. Nirmala, to give an official vote of thanks and conclude the session. Prof. Nirmala appreciated the efforts of teams of both the organizing teams. She specially mentioned the well paradigm approach utilized for organizing talks of the resource persons, which were well relevant with each proceeding day. The motivation behind this workshop was to sensitize the researchers, academicians, students and scientists regarding Intellectual Property Rights (IPR) and present them complete demonstration package of patent filing. The 5-day workshop started with the basics of IPR and was followed up by the methodology of patent filing, granting, oppositions, re-enforcements, marketing strategies and technology transfer. It provided an impetus to the participants for being innovative and creative towards their research and being pro-active for prior art search. This will help them to initiate a project work as per the market demand and which can further be commercialized. Prof. Nirmala concluded the session while thanking each team member and the participants associated with the event.