

भारत सरकार  
Government of India  
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय  
Ministry of Electronics & Information Technology  
इलेक्ट्रॉनिक्स निकेतन, 6, सी जी ओ कॉम्प्लेक्स, नई दिल्ली-110003  
Electronics Niketan, 6, C G O Complex, New Delhi-110003  
Website: www.meity.gov.in

संख्या 11(1)/2022-HCC(TDIL)  
No.....

दिनांक 18.02.2022  
Date.....

ADMINISTRATIVE APPROVAL

Subject : Administrative Approval for implementation of the Project '**Speech technologies in Indian languages**' under the Project titled 'National Language Translation Mission (NLTM) : BHASHINI'.

Implementing Agency: IIT Madras as (Consortium Leader), And IIIT-Hyderabad, IIT Kanpur, IIT Hyderabad, IISc Bangalore, NITK-Surathkal, CDAC Mumbai, IIT Dharwad, NIT Goa, IIT Mandi, IIT Guwahati, CDAC Kolkata, NIT Manipur, IIIT Sri City, SNU Chennai, IIT-Kharagpur, DA-IICT Gandhinagar, SSNCE Chennai, KLEF Vaddeswaram (Consortium Members).

The undersigned is directed to refer to this Ministry's letter of No.11(14)/2018-HCC(TDIL) dated 13.10.2021 conveying the Administrative Approval for the implementation of the Project titled 'National Language Translation Mission (NLTM) : BHASHINI' by Digital India Corporation (DIC), C-DAC, R&D Institutions for research through call for proposals and Other Implementing Agencies (To be identified) with the total outlay of the project of Rs. 495.51 Crore (Rupees four hundred ninety-five crore fifty one lakh only) as Grants-in-aid from Ministry of Electronics and Information Technology (MeitY). The duration of the projects is 36 months. The start of the Mission will be the date of the first release of Grant-in-aid. However, disbursement may go beyond duration of the Mission.

2. Now, the undersigned is directed to convey the Administrative Approval for the implementation of the sub-project namely '**Speech technologies in Indian languages**' under the Project titled 'National Language Translation Mission (NLTM) : BHASHINI' to be implemented by IIT Madras as (Consortium Leader), And IIIT-Hyderabad, IIT Kanpur, IIT Hyderabad, IISc Bangalore, NITK-Surathkal, CDAC Mumbai, IIT Dharwad, NIT Goa, IIT Mandi, IIT Guwahati, CDAC Kolkata, NIT Manipur, IIIT Sri City, SNU Chennai, IIT-Kharagpur, DA-IICT Gandhinagar, SSNCE Chennai, KLEF Vaddeswaram as consortium members at the total outlay of the project is Rs. 50,65,47,00/- (Rupees fifty crore sixty-five lakh forty-seven thousand only) as Grants-in-aid from Ministry of Electronics and Information Technology (MeitY) for a period of 03 years. The details of the project are at Annexure- I2.


3. The standard terms and conditions governing the Grants-in-aid are enclosed at Annexure II.



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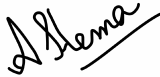
4. This issues with the approval of Secretary, MeitY vide computer no. 3083369 dated 18.02.2022 and concurrence of Integrated Finance Division, MeitY vide computer no. 3083369 dated 17.02.2022.

  
(Ramesh Kumar)  
Deputy Director

Copy to:

1. Pay & Accounts Officer, Pay & Accounts Office. MeitY.
2. Office of Principal Director of Audit, Finance and Communication, Shamnath Marg, Civil Lines, Delhi – 110 054.
3. Finance Division. MeitY.
4. DDO, MeitY.
5. Chief Investigator, Co-Investigators and Head of Implementing Agencies of the Projects.
6. Economic Advisor, MeitY.
7. Shri Vijay Kumar, Scientist 'F', MeitY.
8. Shri Rajeshwar Singh Janwar, Scientist 'E', MeitY.
8. Shri Bharat Gupta, Scientist 'D', MeitY and Sanction File.





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**Annexure – I** to the Administrative Approval No. 11(1)/2022-HCC(TDIL) dated 18.02.2022.

1.	<b>Title of Project:</b>	Speech technologies in Indian languages
2.	<b>Implementation Agencies:</b>	IIT Madras as Consortium Leader,  And  IIIT-Hyderabad, IIT Kanpur, IIT Hyderabad, IISc Bangalore, NITK-Surathkal, CDAC Mumbai, IIT Dharwad, NIT Goa, IIT Mandi, IIT Guwahati, CDAC Kolkata, NIT Manipur, IIIT Sri City, SNU Chennai, IIT-Kharagpur, DA-IICT Gandhinagar, SSNCE Chennai, KLEF Vaddeswaram – Consortium Members.
3.	<b>Chief Investigator:</b>	Prof. Hema A Murthy Computer Science and Engineering Dept. IIT Madras Chennai And C V Jawahar (IIIT-Hyderabad), Vipul Arora (IIT Kanpur), K Sri Rama Murty (IITHyderabad), Sriram Ganapathy (IISc Bangalore), Deepu Vijayasenan (NITK-Surathkal), Pranaw Kumar (CDAC Mumbai), S R Mahadeva Prasanna (IIT Dharwad), T. Veena (NIT Goa), A. D. Dileep (IIT Mandi), Padmanabhan R (IIT Mandi), Prasanta Kumar Ghosh (IISc Bangalore), Preethi Jyothi (IIT Bombay), Rohit Sinha (IIT Guwahati), Joyanta Basu (CDAC Kolkata), Y Jina Chanu (NIT Manipur), Achintya Kumar Sarkar (IIIT Sri City), T. Nagarajan (SNU Chennai), K Sreenivasa Rao (IIT-Kharagpur), Hemant A Patil (DA-IICT Gandhinagar), P Vijayalakshmi (SSNCE Chennai), Suryakanth V Gangashetty (KLEF Vaddeswaram)



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4.	<b>Co-Investigator:</b>	Prof. S. Umesh Electrical Engineering Dept. IIT Madras Chennai
5.	<b>Background/Nature of Project:</b>	
	To create a knowledge-based society by transcending the language barriers and providing the wealth of information available on the Internet in all 22 scheduled languages of India, both in the form of speech and text. Phase I of the mission will be for 3 years and will have 14 languages (including different flavours of Indian English) for automatic speech recognition (ASR), and 18 languages (including their corresponding Indian English flavours) for text to speech synthesis (TTS). Spoken language identification, speaker recognition, speaker and language diarization will include all 22 languages. Further speaker recognition will also include code switched/mixed data.	
6.	<b>Broad Objectives of the Project:</b>	
	<ul style="list-style-type: none"> <li>• Perform automatic transcription (rich text with prosody, speaker language information), translation, and transcreation of a multilingual video meeting in multiple Indian languages while preserving the voice characteristics of the participants in the meeting.</li> <li>• Build assistive speech technologies for the challenged.</li> <li>• Leverage technologies developed as part of a) for other applications, like banking, IVR, e-governance.</li> <li>• Development of end-to-end Spoken keyword detection system with special focus on NE languages</li> <li>• Create speech data in Indian languages that are curated, and is a gold standard that can be used for various future efforts in developing different speech technologies.</li> </ul>	
7.	<b>Deliverables/Expected outcome in physical terms (as applicable):</b>	
	<p>Setting up standards for data collection, curation, archival, using best practices and benchmarks adapted for the Indian language.</p> <p>1) ASR</p> <ul style="list-style-type: none"> <li>• ASR systems in Indian English, Tamil Hindi, Telugu, Bengali, Gujarati, Marathi, Assamese, Kannada, Malayalam, Odia, Punjabi (Tonal language), Bodo (Low Resource language) and Manipuri</li> <li>• Total ASR Corpus size for above languages: 30000 hours</li> </ul>	



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	<ul style="list-style-type: none"> <li>8,000 hours of NPTEL Indian English Technical data curation.</li> </ul> <p>2) TTS</p> <ul style="list-style-type: none"> <li>TTS systems in Hindi, Tamil, Indian English, Marathi, Bengali, Malayalam, Telugu, Assamese, Kannada, Gujarati, Odia, Rajasthani, Bodo, Manipuri, Urdu, Punjabi, Kashmiri, Konkani</li> <li>Total TTS Corpus size for above languages: 1360 hours</li> <li>Develop voice search and voice assistant in Indian English and Hindi.</li> </ul>	
8.	<b>Duration of Project:</b>	3 Years
9.	<b>Milestones:</b>	
	<p>Y1 - State-of-Art Systems in ASR for 10 languages and TTS 14 languages</p> <ul style="list-style-type: none"> <li>HY1 - TTS data collection: 10 hours of data per gender per language (total: 340 hours), ASR data collection: 3000 hrs in different ILs, pronunciation Dictionary for Hindi, English, Tamil, Telugu and TTS systems for Assamese, Bengali, Bodo (female), Hindi, Gujarati, Kannada, Marathi and Malayalam</li> <li>HY2 - TTS data collection: 10 hours of data per gender per language (total: 850 hours), ASR data collection: 8000 hrs in different ILs, Curation of 8000 hours of NPTEL lectures</li> </ul> <p>Y2 - State-of-Art Systems for Speaker Recognition, Diarisation and Language Recog. And remaining 4 ASR Languages and TTS languages</p> <ul style="list-style-type: none"> <li>HY1 - 5700 hrs of ASR data collection in different languages, Refinement in ASR, TTS models</li> <li>HY2 - 6000 hr of ASR data collection in different languages, Curation of 8000 hours of NPTEL lectures</li> </ul> <p>Y3 – SOTA for Voice Search, Transcreation of Translated videos, Prosody Modelling and Assistive technologies for dysarthria</p> <ul style="list-style-type: none"> <li>HY1 - 3000 hrs ASR data, Audio-visual syncing for ten selected courses, A complete prototype for S2S from English to Hindi with lip sync will be made available for courses, Prosody manipulation in some languages</li> <li>HY2 - 3000 hrs ASR data, Curation of 2000 hours of NPTEL lectures, Prosody manipulation in some more languages</li> </ul>	
10	<b>Agency with which link up is established/proposed:</b>	<p>a) NPTEL IIT Madras</p> <p>b) e-governance of corresponding states of languages.</p>



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11	Likely End User(s):	The core speech technologies developed in this project will be made available to start-ups and other institutions to develop applications in education, healthcare, e-governance banking, IVR etc to reduce the language barrier for common citizens and make it easy to access information and use digital technologies.
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12 Total Budget outlay (year wise):

Total Outlay of the Project:-Rs.50,65,47,800/-

Overall Budget Table Head-wise in Lakhs				
Head	Year 1	Year 2	Year 3	Total
Equipments	281.7	120.51	8	410.21
Manpower	885.5	936.7	956.9	2779.1
Special Data/Challenge/ Leadership	142.26	92.19	82.62	317.07
Contingencies	96	66	60	222
Consumables	57	60	59	176
Travel/Training/ Workshop for Startups	54	63.5	61.5	179
Overhead (8% excl. Equipment & Data Collection)	90.60	93.30	94.19	278.09
Data Collection + Curation (ASR & TTS)	704			704
Total	2,311.06	1,432.20	1,322.21	5,065.47

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**Institute Wise Budget:**

**Annexure I: Budget (R&D IIT Madras: ASR & TTS) in lakhs of rupee:**

Heads	Year 1	Year 2	Year 3	Total
Equipment	150.00	99.41	0.00	249.41
Man Power (SPO)	86.40	93.60	100.80	280.80
Man Power (PO)	325.00	350.00	400.00	1,075.00
Man Power (CoE)	50.00	70.00	30.00	150.00
Organizing Data, Challenges and Leadership board	40.00	40.00	40.00	120.00
Contingencies	50.00	30.00	25.00	105.00
Consumables	20.00	25.00	25.00	70.00
Travel/ Training/ Workshop for Startups	25.00	35.00	35.00	95.00
Overhead (8% excl.Equip & Data collection)	47.71	51.49	52.46	151.66
Data collection (ASR&TTS)+curation	704.00	0.00	0.00	704.00
<b>Total</b>	<b>1,498.11</b>	<b>794.50</b>	<b>708.26</b>	<b>3,000.87</b>

**Annexure II: Budget (R&D IITH: Audio Visual Processing) in lakhs of rupees**

**Annexure II: Budget (R&D IITK: Audio Visual Processing) in lakhs of rupees**

Heads	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Equipments	12.50	2.50	0.00	15.00	12.50	2.50	0.00	15.00
Manpower	26.00	25.00	25.00	76.00	26.00	25.00	25.00	76.00
Consumables	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Travel	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Contingency	1.00	1.00	1.00	3.00	1.00	1.00	1.00	3.00
Overhead (8% excl.Equip)	2.48	2.40	2.40	7.28	2.48	2.40	2.40	7.28
<b>Total</b>	<b>45.98</b>	<b>34.90</b>	<b>32.40</b>	<b>113.28</b>	<b>45.98</b>	<b>34.90</b>	<b>32.40</b>	<b>113.28</b>

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Annexure IV: Budget (R&D IISc: Speaker Diarization) in lakhs of rupees					Annexure IV: Budget (R&D NITK: Speaker Diarization) in lakhs of rupees			
Heads	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Equipment	5.00	0.00	0.00	5.00	5.00	0.00	0.00	5.00
Manpower	22.00	22.00	22.00	66.00	22.00	22.00	22.00	66.00
Contingency	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Consumables	1.50	1.50	1.50	4.50	1.50	1.50	1.50	4.50
Travel	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Overhead (8% excl.Equip)	2.20	2.20	2.20	6.60	2.20	2.20	2.20	6.60
<b>Total</b>	<b>34.70</b>	<b>29.70</b>	<b>29.70</b>	<b>94.10</b>	<b>34.70</b>	<b>29.70</b>	<b>29.70</b>	<b>94.10</b>

188.20

**Annexure V: Budget(R&D CDAC, Mumbai: Integration and Deployment) in Lakhs of rupees**

Heads	Year 1	Year 2	Year 3	Total
Equipment	1.10	1.10	1.10	3.30
Manpower	48.00	48.00	48.00	144.00
Contingency	1.00	1.00	1.00	3.00
Consumables	1.00	1.00	1.00	3.00
Travel	2.00	2.00	2.00	6.00
Overhead (8% excl.Equip)	4.16	4.16	4.16	12.48
<b>Total</b>	<b>57.26</b>	<b>57.26</b>	<b>57.26</b>	<b>171.78</b>

Annexure VI: Budget(R&D IITDH: Development of Scalable Speaker Recognition Technology) in lakhs of rupees					Annexure VI: Budget(R&D NITK: Development of Scalable Speaker Recognition Technology) in lakhs of rupees			
Heads	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Equipments	7.50	6.00	2.45	15.95	7.50	6.00	2.45	15.95
Manpower	25.00	25.00	25.00	75.00	25.00	25.00	25.00	75.00
Consumables	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Travel	2.00	2.00	2.00	6.00	2.00	2.00	2.00	6.00
Contingency	3.00	3.00	3.00	9.00	3.00	3.00	3.00	9.00
Speech Data Collection	6.25	5.00	2.50	13.75	6.25	5.00	2.50	13.75
Overhead (8% excl.Equip & Data Collection)	2.56	2.56	2.56	7.68	2.56	2.56	2.56	7.68
<b>Total</b>	<b>48.31</b>	<b>45.56</b>	<b>39.51</b>	<b>133.38</b>	<b>48.31</b>	<b>45.56</b>	<b>39.51</b>	<b>133.38</b>

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	Annexure IX (R&D IITG:Speech Technologies for North Eastern Languages) in lakhs of rupees				Annexure IX (R&D IIIT Sricity:Speech Technologies for North Eastern Languages) in lakhs of rupees			
Head	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Capital Equipment	6	0	0	6	2	0	0	2
Manpower	11.6	12.42	13.24	37.26	3.6	3.86	4.12	11.58
Contingencies	2	2	2	6	1	1	1	3
Consumable Stores	2	2	2	6	1	1	1	3
Travel and Training	2	2	0	4	1	1	1	3
Overheads(8% excl Equipment & Data)	1.408	1.4736	1.3792	4.2608	0.528	0.5488	0.5696	1.6464
Data Collection	42.24	0	0	42.24	0	0	0	0
<b>Total</b>	<b>67.248</b>	<b>19.8936</b>	<b>18.6192</b>	<b>105.7608</b>	<b>9.128</b>	<b>7.4088</b>	<b>7.6896</b>	<b>24.2264</b>

	Annexure IX (R&D NIT Manipur:Speech Technologies for North Eastern Languages) in lakhs of rupees				Annexure IX (R&D CDAC Kolkata:Speech Technologies for North Eastern Languages) in lakhs of rupees			
Head	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Capital Equipment	2	0	0	2	2	0	0	2
Manpower	3.6	3.86	4.12	11.58	9.2	9.86	10.52	29.58
Contingencies	1	1	1	3	1	1	1	3
Consumable Stores	1	1	1	3	1	1	1	3
Travel and Training	1	1	1	3	1	1	1	3
Overheads(8% excl Equipment & Data)	0.528	0.5488	0.5696	1.6464	0.976	1.0288	1.0816	3.0864
Data Collection	0			0	0			0
<b>Total</b>	<b>9.128</b>	<b>7.4088</b>	<b>7.6896</b>	<b>24.2264</b>	<b>15.176</b>	<b>13.8888</b>	<b>14.6016</b>	<b>43.6664</b>
								<b>197.88</b>

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Head	Annexure X: Budget (R&D SNU: Prosody Modeling) in lakhs of rupees				Annexure X: Budget (R&D IITKgp: Prosody Modeling) in lakhs of rupees			
	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Equipment**	8.50	0.00	0.00	8.50	8.50	0.00	0.00	8.50
Manpower*	25.00	25.00	25.00	75.00	25.00	25.00	25.00	75.00
Consumables	1.25	1.25	1.25	3.75	1.25	1.25	1.25	3.75
Travel	1.00	1.00	1.00	3.00	1.00	1.00	1.00	3.00
Contingency	0.50	0.50	0.50	1.50	0.50	0.50	0.50	1.50
Overhead (8% excl.equip)	2.22	2.22	2.22	6.66	2.22	2.22	2.22	6.66
<b>Total</b>	<b>38.47</b>	<b>29.97</b>	<b>29.97</b>	<b>98.410</b>	<b>38.47</b>	<b>29.97</b>	<b>29.97</b>	<b>98.410</b>

Annexure XI: Budget (R&D DAIICT: Assistive Speech Technologies) in lakhs of rupees					Annexure XI: Budget (R&D SSNCE: Assistive Speech Technologies) in lakhs of rupees				
Head	Year 1	Year 2	Year 3	Total	Head	Year 1	Year 2	Year 3	Total
Equipment*	7.50	0.00	0.00	7.50	Equipment*	7.50	0.00	0.00	7.50
Manpower*	21.00	21.00	21.00	63.00	Manpower*	21.00	21.00	21.00	63.00
Consumables	1.00	1.00	1.00	3.00	Consumables	1.00	1.00	1.00	3.00
Travel	1.00	1.00	1.00	3.00	Travel	1.00	1.00	1.00	3.00
Contingency	1.00	1.00	1.00	3.00	Contingency	1.00	1.00	1.00	3.00
Overhead(8% excl. equip)	1.92	1.92	1.92	5.76	Overhead(8% excl. equip)	1.92	1.92	1.92	5.76
<b>Total</b>	<b>33.42</b>	<b>25.92</b>	<b>25.92</b>	<b>85.26</b>	<b>Total</b>	<b>33.42</b>	<b>25.92</b>	<b>25.92</b>	<b>85.26</b>

Annexure XII: Budget (R&D KLU: Speech Quality Control) in lakhs of rupees				
Head	Year 1	Year 2	Year 3	Total
Minor Equipments** (From Minor Equipments Table)	16.00	-	-	16.00

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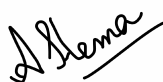
<b>Manpower* (From Manpower Table)</b>	20.00	22.00	24.00	<b>66.00</b>
<b>Travel/Training/Workshop</b>	1.00	1.00	1.00	<b>3.00</b>
<b>Consumables</b>	1.50	1.50	1.50	<b>4.50</b>
<b>Contingencies</b>	3.00	3.00	3.00	<b>9.00</b>
<b>Overhead (8% excl. equip)</b>	2.04	2.20	2.36	<b>6.60</b>
<b>Total</b>	<b>43.54</b>	<b>29.70</b>	<b>31.86</b>	<b>105.10</b>

<b>Overall Total Budget across all Annexure (in lakhs of Rupees)</b>				
<b>Heads</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Total</b>
<b>Annexure I: R&amp;D: ASR &amp; TTS</b>	<b>1,498.11</b>	<b>794.50</b>	<b>708.26</b>	<b>3,000.87</b>
<b>Annexure II: IITH, IITK (audio visual processing)</b>	<b>91.96</b>	<b>69.80</b>	<b>64.80</b>	<b>226.56</b>
<b>Annexure III: IITH, IITK (voice search)</b>	<b>64.00</b>	<b>54.00</b>	<b>54.00</b>	<b>172.00</b>
<b>Annexure IV: IISc, NITK</b>	<b>69.40</b>	<b>59.40</b>	<b>59.40</b>	<b>188.20</b>
<b>Annexure V: CDAC, Mumbai</b>	<b>57.26</b>	<b>57.26</b>	<b>57.26</b>	<b>171.78</b>
<b>Annexure VI: IITDH (Speaker Recognition Technology)</b>	<b>96.62</b>	<b>91.12</b>	<b>79.02</b>	<b>266.76</b>
<b>Annexure VII: IIT Mandi, NIT Goa (Spoken Language recognition)</b>	<b>66.81</b>	<b>54.78</b>	<b>47.05</b>	<b>168.63</b>
<b>Annexure VIII: IISc, IITB (ASR: Extremely Low resource languages)</b>	<b>78.90</b>	<b>61.26</b>	<b>60.18</b>	<b>200.34</b>
<b>Annexure IX: IITG, IIT Sricity, NIT Manipur (Speech Technologies for Northern Eastern Languages)</b>	<b>100.68</b>	<b>48.60</b>	<b>48.60</b>	<b>197.88</b>
<b>Annexure X : SNU, IITKgp (Prosody Modeling)</b>	<b>76.94</b>	<b>59.94</b>	<b>59.94</b>	<b>196.82</b>
<b>Annexure XI: DAICT, SSNCE (Assistive Technologies)</b>	<b>66.84</b>	<b>51.84</b>	<b>51.84</b>	<b>170.52</b>
<b>Annexure XII: KLU (Speech Quality Control)</b>	<b>43.54</b>	<b>29.70</b>	<b>31.86</b>	<b>105.10</b>

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	<p>educational purposes is perhaps about 5-10%. This is primarily due to the fact that most people in India are uncomfortable with English. While English is taught in school, and most people can read English, the accents of English make it difficult to follow the video. The objective of this effort is to bridge this gap by the use of speech and machine translation technologies.</p> <p>While the primary technologies are ASR and TTS, transcreation of a video in various multiple Indian languages will require additional speech technologies, namely, speaker and language diarization, speaker and language recognition, voice search, audio-visual event based syncing, a concerted and focused effort for low resource Indian languages.</p>
17	<p><b>Stages for Release of Payment:</b></p>
	<p><b>Pre-condition status of implementation:</b> Issue of Administrative Approval and as per quantitative roadmap</p> <p><b>Documentation to be supplied by Implementation Agency:</b> Acceptance to the terms and conditions of GIA, special terms and conditions for the Mission project, Progress Report, UC</p> <p><b>Amount to be Released:</b> As per the recommendation of PRSG for release followed by the availability of fund and as proposed by Programme Division</p>



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**Annexure – II** to the Administrative Approval No. 11(1)/2022-HCC(TDIL dated 18.02.2022.

**TERMS AND CONDITIONS GOVERNING GRANT-IN-AID**

**i) Terms & conditions governing Grants-in-aid for funding R&D Projects**

**I. Applicability**

These terms & conditions apply to the institutions who receive Grants-in-aid from MeitY for undertaking R&D projects.

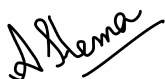
**II. Definition**

In these instructions:

- 1) The "institution" means any technical, scientific or academic establishment where research work is carried out through funding by MeitY. (including R&D Laboratories, Autonomous Scientific Societies etc.)
- 2) "Inventor" means researcher/ employee of the Institution whose duties involve carrying out scientific or technical research work in an R&D project funded by MeitY.
- 3) "Intellectual Property Rights" include patents, trademarks, registered designs, copyrights and layout design of integrated circuits.

**III. General Conditions**

- (1) The grant is for undertaking the specific project as approved by MeitY and shall be subject to the following conditions:
  - (i) The grant shall be spent for the project within the specified time
  - (ii) Any portion of the grant which is not ultimately required for expenditure for the approved purposes shall be duly surrendered to MeitY.
- (2) For a project being executed by MeitY grant, Application by grantee institution for any other financial assistance or receipt of grant/loan from any other Agency/ Ministry/ Department for the same project should have the prior permission/approval of MeitY.
- (3) The grantee institution is not allowed to entrust the implementation of this project for which Grants-in-aid is received, to another institution and to divert the Grants-in-aid received from MeitY as assistance to the later institution. However available IP core etc. could be procured with due payment of license fee as per the recommendations of PRSG.
- (4) The investigator(s) should not enter into collaboration with a foreign party (individual/ academic institution/ industry) in execution of this project without prior approval of MeitY.



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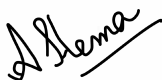
- (5) The grantee institution(s) shall make all efforts to protect the Intellectual Property Rights (IPR) being generated through the research project and follow the section "Guidelines for IPR" as laid by MeitY.
- (6) The grantee institution, while undertaking the technology transfer/commercialization activities, shall follow the procedure laid down by their own institution. In case there is no such procedure/framework within the grantee institution, a transparent mechanism based on the guidelines indicated at section "Guidelines for Technology Transfer/commercialization" of MeitY shall be followed.
- (7) In case the grantee institution does not license the patent/ commercialise the technology within a period of 5 years from the time of obtaining the patent/ development of technology, the grantee institution will make available the patent/technology in public domain for usage by Indian companies/ MSMEs/ start-ups/ entrepreneurs/ citizens.
- (8) The Grantee institution should indemnify MeitY from any legal and/ or financial encumbrance arising out of any infringement of IPR/ licensing of IPR/ technology transfer/ commercialization.
- (9) Any dispute on any matter related to the implementation of the project, the decision of Secretary, MeitY, shall be final and binding on the grantee institution.
- (10) MeitY reserves the right to modify these terms and conditions governing the grant-in-aid from time to time reflecting the directions of the Government of India.

#### IV. Monitoring & Review of the project

MeitY shall appoint a Project Review and Steering Group (PRSG) comprising of representatives from MeitY and other experts to periodically review and monitor the technical and financial status of the project. PRSG will periodically monitor the project in all respects including technical and financial progress of the project.

#### V. Acquisition & Management of Assets

- (1) The grantee institution shall maintain an audited record in the form of a register in the prescribed proforma for permanent, semi-permanent assets acquired solely or mainly out of the MeitY grant. The applicable procedures for procurement shall be followed for acquisition of assets.
- (2) The assets referred to above will be the property of MeitY and should not, without prior sanction of MeitY, be disposed off or encumbered or utilised for the purposes other than those for which the grant has been sanctioned
- (3) The grantee institution shall send a list of assets referred above to MeitY at the end of each financial year as well as at the time of seeking further instalments of the grant;



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- (4) Should at any time grantee institution cease to exist, such assets etc., shall revert to MeitY;
- (5) At the conclusion/ termination of the project, the Government of India will be free to sell or otherwise dispose off the assets which are the property of the Government. The Institution shall render to the Government necessary facilities for arranging the sale of these assets. The Government of India has the discretion to transfer the assets to the concerned institution or any other institution if it is considered appropriate.

#### VI. Utilization of Grants and Audit

- (1) The grantee institution should maintain separate audited account for the project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest, thus earned should be reported to MeitY. The interest so earned will be treated as a credit to the grantee institution to be adjusted towards future installment of the grant; MeitY or its nominee/s will have the right of access to the books and accounts of the grantee institution for which a reasonable prior notice would be given
- (2) The grantee institution shall render an audited statement of accounts and utilization certificate to MeitY every year. The audited statement of accounts relating to grants given during financial year together with the comments of the auditor regarding the observance of the conditions governing the grant should be forwarded to the MeitY within six months following the end of the relevant financial year;
- (3) The utilisation of grant for the intended purposes will be looked into by the Auditor of grantee institution according to the directives issued by the Government of India at the instance of the Comptroller and Auditor General and the specific mention about it will be made in the audit report;
- (4) The grantee institution shall render progress-cum-achievement reports at interval of not exceeding six months on the progress made on all aspects of the project including expenditure incurred on various approved items during the period.
- (5) The grantee institution will refund unspent balance in addition to the interest, if any accrued on the unspent balance in the total outlay of the project.
- (6) Ministry or Department will be at liberty to take appropriate action under the Rule 212(1) of GFR 2005 relating to utilization of funds in the specified time and where such certificate is not received from the grantee within the prescribed time (reference General Financial Rules 2005).

#### VII. Guidelines for managing IPRs:

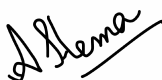


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1. The IPR arising out of sponsored project(s) will be with grantee institution(s). While the patent may be taken in the name(s) of inventor(s), the institution(s) shall ensure that the IPR is assigned to institution(s). In cases where the funding/resourcing of researchers have been done jointly with other organizations, the IP rights would be appropriately shared among them.
2. The Government of India/ Government bodies ( including its PSUs, Government autonomous societies & section 25 companies) shall have right to obtain a royalty- free license for the Intellectual Property for deployment/use of the same for non-commercial purposes. However, in case, IP is proposed for commercial usage, the terms of licensing may be mutually agreed with the grantee institution(s) possessing IPR.
3. The grantee institution shall submit the financial requirements for filing of IPR as part of the R&D proposal. The contingency head could be used for provisioning of the expenditure for filing of IPR with a ceiling of Rs. 15 Lakhs for the cost of initial filing, but excluding for the annuity fee. International Patent filing will be permitted. The amount will be released based on the recommendations of PRSG constituted by MeitY for the concerned project. If, for any reason, it is not possible to meet the expenses from the project grant, like in the case of the need for filing of IPR arising after the closure of the project, an application may be made separately by the institution to MeitY for sanction/ reimbursement of the expenses incurred in filing of the IPR.
4. The grantee institution shall inform MeitY about the patents filed/obtained and IPR arising out of the R&D project on annual basis over the project duration and subsequent 5 years period after the project closure.
5. The grantee institution shall provide information to MeitY about trading/ selling/ transferring /licensing the IP rights, within a period of 6 weeks from conclusion of the agreement relating to such a commercial event.
6. The grantee institution shall take appropriate licence in case of export of 'Special Chemicals, Organisms, Materials, Equipment and Technologies' (SCOMET) items as per the prevailing provisions of Foreign Trade Policy from Directorate General of Foreign Trade, under Department of Commerce, Government of India.
7. As the R& D is supported by public fund, the grantee institution should ensure that the interests of India and its citizens are fully protected, while licensing of patents/transfer or commercialization of technology.
8. The institution is permitted to retain the benefits and earnings arising out of the IPR for plough back to pursue research/research related activities.
9. Notwithstanding the above, MeitY reserves the right to take over ownership of the rights of the Intellectual property arising out of this project, in the interest of the Indian sovereignty, without any compensation to the grantee institution.

#### VIII. Guidelines for Technology Transfer/commercialization:




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The Grantee institution may use the following guidelines in case there is no laid down Procedure within their own institution:

- (1) The transfer of technology may normally be undertaken by the central office of the grantee institution equipped to handle legal issues with regard to technology/ IP licensing.
- (2) The grantee institution shall constitute a Transfer of Technology (ToT) Committee for evaluation of the applications for ToT and for working the appropriate revenues expected out of the ToT
- (3) Prior to seeking the expression of interest for technology transfer/ commercialization, there should be sufficient disclosure of the technical details, features and capabilities of the project through advertisement, publication on the websites of the Institution and of MeitY, and exhibitions, if any held on the related themes during the relevant period. The ToT proposal may be given wide publicity in one national daily besides in journals relating to the theme and by writing to the industry associations related to the theme.
- (4) Normally, a period of 6 weeks shall be given for interested parties to file their applications relating to Expression of Interest, which may require customization based on the technology/product/service/prototype proposed to be transferred by the grantee institution.
- (5) The ToT Evaluation Committee shall undertake a techno-commercial evaluation of the proposals received, adopting a 2-stage process.
- (6) The ToT committee formed by the grantee institution will work out the cost of ToT on case-to-case basis considering the ground realities like i) development cost of the project ii) market demand of the technology/product iii) ability of the industry to pay for the technology iv) work involved from prototyping to packaging. The cost of capital equipment will be excluded from the total cost of development. Such an estimated cost shall be used as the Internal Bench Mark (IBM) for evaluating the ToT fee and royalty, in Stage 2.
- (7) After due diligence by the ToT committee a technology transfer/ licensing agreement shall be signed which shall include license of IPRs through existing legal procedures.
- (8) It is desirable that technology be transferred on a non-exclusive basis. Exclusive licensing should be in the rarest of rare cases based on sufficient justification by the ToT Evaluation Committee and approval by the Head of the institution! Competent Authority and with the approval of MeitY.
- (9) The institution is permitted to retain the benefits and earnings arising out of the technology transfer/ licensing of IPRs for ploughing back to pursue research in related areas.



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## IX. Guidelines for publication of results

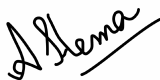
- (1) Investigators wishing to publish technical/ scientific papers based on the research work done under the project, should acknowledge the assistance received from this Department and a copy of the communicated/published paper be sent to MeitY.
- (2) If the results of research are to be legally protected for the intellectual property, then its publication can be undertaken only after due care is taken for legal protection of the intellectual property rights.

### Note:

- (1) While submitting the project proposal, a certificate of acceptance of terms and conditions and undertaking to follow the guidelines as above needs to be given by the chief investigator and endorsed by the competent authority of the institution. For any deviation from the terms & conditions and guidelines, the grantee institution will take the permission/approval of the competent authority of MeitY.
- (2) The guidelines for managing IPR and Technology Transfer/ commercialization will not be applicable for the following exceptions and specific approvals have to be taken in respect of IPR and ToT:

(i) The R&D projects of strategic applications:

The projects jointly funded by/for strategic Departments like Defence, Space and Atomic Research etc.



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**Specific Terms & Conditions governing Grants-in-aid relating to the Consortium mode project:**

**Responsibilities of Consortium Leader**

- i) The MeitY Grants-in-aid will be released to the consortia leader who in turn will release the assigned funds to the consortia members based on the requirements and satisfactory performance of the consortia member and the recommendations of PRSG/ MeitY.
- ii) Consortia Leader would ensure the delivery of the end product as per specified Software Requirement Specifications (SRS).
- iii) Evolve Standards and Evaluation Mechanism for modules/ sub-systems/components as well as the end product.
- iv) Evolve internal monitoring mechanisms for consortium members
- v) Integration Testing and resolving interface issues of the modules developed by CMs.
- vi) Submission of Software life cycle documents to MeitY.
- vii) Obtaining individual Utilization Certificate / Statement of Account/Audited Statement of Account/ Six-monthly Financial and Technical Progress Report etc. from Consortium Members and submission of consolidated Utilization Certificate / Audited Statement of Account / Progress Report to MeitY.

**Responsibilities of Consortium Members**

- i) Development of modules/sub-systems/components /defined interface assigned to them
- ii) Close interaction with Consortium Leader and other Consortium Members to ensure delivery of the module.
- iii) Cooperation with Consortium Leader regarding monitoring and evaluation of assigned modules/sub-systems/components /defined interface.
- iv) Submission of Utilization Certificate / Statement of Account /Audited Statement of Account/ Six-monthly Financial and Technical Progress Report etc. to Consortium Leader for submission to MeitY.



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