Dated: 22.05.2023

ADMINISTRATIVE APPROVAL

Subject: Administrative Approval in respect of the project entitled "System on Chip Design for Diagnosis of Eye diseases in Retinal Image" to be implemented by Mohamed Sathak Engineering College, Ramanathapuram, Tamil Nādu under Chips to Startup (C2S) Programme.

I am directed to refer to Administrative Approval dated 18.05.2023 for the implementation of Programme "Chips to Startup (C2S) and to convey now the approval of the Competent Authority to the implementation of the above-mentioned project at a total estimated cost of Rs. 75.70 Lakh (Rupees Seventy Five Lakh Seventy Thousand only) as grant-in-aid from Ministry of Electronics and Information Technology. The duration of the project is 5 years. The details of the project are given in the enclosed **Annexure-I**.

2. This issues with the approval of Secretary, MeitY vide computer No. 3080449 dated 03.05.2023 and concurrence of JS&FA, Ministry of Electronics & Information Technology vide computer No. 3080449 dated 03.05.2023.

(Meenakshi Kumar)
Under Secretary to Govt. of India

1. The Pay & Accounts Office (PAO), MeitY
2. Office of the Principal Director of Audit, Finance & Communications, Civil Lines, Near Old Secretariat, Shamnath Marg, New Delhi -110 054.
3. Prof. E. Dhiravidachelvi, Chief Investigator, Dept. of ECE, Mohamed Sathak Engineering College, Kilakarai ,Ramanathapuram, Tamil Nādu- 623806
4. DG(NIELIT)/CFO(NIELIT)
5. GC(SV)/GC(AKP)/Sci. 'E'(NG)/Sci. 'D'(HG)/DS(DKS), MeitY
6. Finance Division/HRD/D&D Section, MeitY
7. Master Sanction file.

1	**Name of the Project**	System on Chip Design for Diagnosis of Eye diseases in Retinal Image
2	**Objective& Deliverables**	**Objectives:**

Objectives:

- To develop a customized chip, by classifying the diseases of Retinal images -Diabetic Retinopathy, Glaucoma & Cataract.
- To develop AI classifier for diagnosing or screening the disease there by preventing subsequent loss of visual capability
- To develop a wearable device, diagnosing the diseases during screening for Early detection of the retinal diseases

Deliverables:

- Ability to identify and diagnosis the diseases at the early stage.
- Ability to get more accuracy even for blurred images.
- Developing a Customized Chip for detecting the disease with high accuracy.
- Developing a wearable Device.

3	**Year wise Milestones**	Annexure A
4	**Name of Implementing Agencies and Legal Status**	Mohamed Sathak Engineering College, Ramanathapuram, Tamil Nādu – Academic institute (Private)
5.	**Total Project Duration**	5 Years

Expected date of commencement: Date of 1st release of GIA

Expected date of completion: 5 Years from the date of 1st release of GIA or date of completion of C2S Programme (i.e. 10.02.2027), whichever is earlier

6.	**Total Project Outlay :**	Rs. 75.70 Lakh

Year Wise Budget Outlay of the Project:

Budget Head (GEN)	Year Wise Budget Requirement (Rs. In Lakhs)					
	1st Year	2nd Year	3rd Year	4th Year	5th Year	Total
Capital Equipment	18.80	0.00	0.00	0.00	0.00	18.80
Consumable Stores	0.00	0.00	1.00	1.00	1.00	3.00
Duty on Import	0.20	0.20	0.30	0.30	0.50	1.50
Manpower	7.80	7.80	7.80	7.80	7.80	39.00
Travel & Training	0.50	1.00	1.00	1.00	1.00	4.50
Contingencies	0.50	1.00	1.00	1.00	1.00	4.50
Overheads, if any	0.10	0.10	0.20	2.00	2.00	4.40
Grand Total	**27.90**	**10.10**	**11.30**	**13.10**	**13.30**	**75.70**

| 7. | **Mode and extent of funding** | : | **As indicated below:** |

(i) Budgetary Support

       (a) Grants-in-aid from MeitY   :   Rs. 75.70 Lakh

       (b) Loan   :   NIL

(ii) Internal generation   :   NIL

(iii) External Agency, if any   :   NIL

8. Stages of release

Release No.	Pre-condition/ Stages	Documentation to be supplied by Implementation Agency	Amount to be released
1st release	Initiation of the project	Acceptance of Terms and Conditions governing Grants-in-aid.	Rs. 27.90 Lakh
2nd and subsequent releases	Recommendations of the PRSG & satisfactory progress report of the project	a) Submission of Utilization Certificate of the previous release. b) Technical & Financial Progress Report. c) Audited Statement of Accounts (at the time of Project Closure).	Rs. 47.80 Lakh
		Total	**Rs. 75.70 Lakh**

(Meenakshi Kumar)
Under Secretary to Govt. of India

Year-wise deliverables/Outcomes with specific intermediate milestones

Year	Quarterly Milestones	Timelines	Outcomes
2023	Q1-Q2 Q3-Q4	Data collection from open source, Data collection from Eye hospital, Pre-processing & Enhancement	Able to create Data set with pre-processed quality images
2024	Q1-Q4	Image Analysis-Image Processing Techniques-Optimization, Developing Classifier Algorithm ,Optimizing the Simulation results	Able to extract the features for the ROI images and optimized simulated images are obtained
2025	Q1-Q2 Q3-Q4	Specification, functional verification, Placing Routing	Basic steps for IC fabrication initiated
2026	Q1-Q2 Q3-Q4	Verification, Fabrication, Testing, Hardware Implementation	Able to implement algorithm in hardware level. Analyze and optimize algorithm based on the result
2027	Q1-Q2 Q3-Q4	Training, Commercialization Development, End Product	Developing a Customized Chip for detecting the disease with improved accuracy Speed.