

# **IOS MCN Project**

## Membership Agreement

Version 2.0  
30 January 2024

# **Indian Open Source Mobile Communication Network (IOS MCN)**

## **1. About IOS MCN Project**

- This Open-Source Project, IOS MCN shall be a collaboration between industry, academia and the Government, with a governance process based on global best practices. The mission of this Project shall be to facilitate the telecom ecosystem by building a common platform for providing a commercial grade, common and open software base to enable stakeholders to rapidly use, customise, make derivative works from and thereby create Mobile Communication (5G and beyond) products and services
- This Project will engage the telecom ecosystem by building a membership-based partnership amongst start-ups, telecom operators, system integrators, equipment vendors, multinational corporations etc This Project will provide the institutional mechanism to sustain this effort for the future with support from the Government as well as other sponsors.

## **2. Background and Origin**

The Project is the outcome of a Whitepaper "Feasibility of Open Source for 5G" released by TSDSI (Telecom Standards Development Society of India) in November 2021, after extensive deliberations involving 40+ telecom experts - start-ups, operators, equipment vendors and academia. To enable the initiation of this Project, the Government of India has provided seed funding for a project to be executed jointly by the Indian Institute of Science (IISc), Bengaluru, the Indian Institute of Technology Delhi (IITD), and the Centre for Development of Advanced Computing (CDAC), Thiruvananthapuram. The Project will include several members from industry who will contribute through funding, expertise, development skills, and code.

## **3. Objective of the Project**

The objective is to

- a. Create an Indian Open-Source Mobile Computer Network (IOS MCN) platform
  - Create an Open-Source, 3GPP, and ORAN Compliant Mobile Communication software platform (IOS-MCN)
  - Provide a commercial grade, common and open software platform to enable vendors to rapidly use, customise, make derivative works from and thereby create Mobile Communication (5G and beyond) products and services
  - Provide deep technical support to the industry in using IOS-MCN platform
- b. Onboard members to the Project to facilitate proliferation, usage and enhancements to the IOS MCN platform
- c. Evolve a sustainable model for the Project to consistently contribute to the open-source Telecom ecosystem

This Project shall promote vendor diversification and allow start-ups and more established companies to focus on their unique innovation instead of replicating common software components, hence accelerating the development of 5G & beyond products and services.

#### 4. Roadmap for the IOS MCN Project

IOS MCN Software Platform Development

The initial target spans 2 years. (Extension options are open).

Delivery Track-1: Developing production-grade open source end-to-end 5G software to enable manufacturers to deliver 5G CN and 5G base station (gNB).

Delivery Track-2: Enhancing 5G RAN to comply with O-RAN architecture, providing the entire O-RAN framework to enable flexible differentiated features with xAPPs/rAPPs, and providing production-grade Open 5G software for O-RAN network elements, including the DU and CU.

Some of the potential release focus areas are:

Release A	5G Stack for Small Indoor Factory/Manufacturing Unit	3GPP Release 15 Compliance
Release B	5G Stack for Indoor and Outdoor Larger Campus	3GPP Release 15 with some Release 16 enhancements
Release C	5G Stack for Multi-site Indoor/Outdoor Private 5G with local breakout	3GPP Release 16 and ORAN Compliance

#### 5. Membership

Membership is to raise structured and sustainable funds and support for IOS MCN Project based on mutual value engagement. Members will be an integral part of IOS MCN Project and will enjoy the privileges and perform the roles and responsibilities based on the governance model approved by the GB (Governing Board) of IOS MCN. The Governing Board can update the governance model from time to time, and it will be communicated to all the members through email/written letters.

##### a. Membership Benefits

By joining the IOS MCN consortium, the member will enjoy the following benefits.

- Industry Visibility & Recognition
- Trust and Credibility from Customers
- Build Technology competency
- Faster Product Development
- Ground for test and trials
- Technology Influence and leadership

##### b. Types of membership

There are different types of membership based on the specific privileges listed below.

S.No	Type of Membership	Benefits	Fees (in cash /kind)
1	Platinum	Governing Board Seat: 1 Technical Oversight Gold Committee: 1	Annual Fee: INR 1 Crore
2	Gold	Governing Board Seat: 1/3[1] Technical Oversight Committee: 1	INR 25 lakhs
3	Silver	Governing Board Seat: 1/5[2] Technical Oversight Committee: 1/2[3]	INR 12 Lakhs

- ✓ The membership requires a two-year membership commitment.
- ✓ The membership fee can be paid in cash or in kind. If the payment is based on in-kind contributions, an "In-kind contribution valuation" document should be submitted to the governing board. The duly signed valuation document needs to be submitted along with this agreement document .
- ✓ For all types of membership, an initial full year's payment of fees is due upon receipt and acceptance of an executed membership agreement and payable within thirty days of the date of invoice from the IOS MCN (or its official entity). All Fee amounts are irrevocable and non-refundable. One year's fees are due upon acceptance as a member, and the second year's fees are due on the first anniversary of membership
- ✓ The IOS MCN Governing Board shall assess the in kind contribution valuation and approve the same with modifications, if any as deemed fit. The IOS MCN Governing Board has the right to reject any membership application.
- ✓ Periodic assessment of the in kind contributions shall be made by the IOS MCN Governing Board or its authorised entities.

## 6. Marketing

The membership information and the member organisation's logo shall be published through the IOS MCN website and other communication channels. In case of any reservations, the relevant details shall be attached along with this membership agreement.

PR: Please initial here in case the announcing your participation via press release IOS MCN to consider

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Logo Usage: Please initial here if you do not want IOS MCN to consider displaying your logo on IOS MCN Website

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## 7. Contributions

The member organisations can contribute to IOS MCN project and subprojects through:

- a) Providing Hardware Products with respective licences
- b) Providing Software Products (tools or licences)
- c) Open Source code previously developed by the member organization to be part of the IOS MCN code distribution. Any contributed code will have to be accompanied by a suitable open-source license and a certificate of code provenance
- d) Employees or affiliates developing engineering artefacts like (but not limited to) specifications, project guides, source code, test scripts, test or development related documents etc. for the IOS MCN project.

All these contributions will be owned by the IOS MCN Project and can be licensed or distributed based on its licensing terms and conditions.

For hardware and software tools, if the same is on a returnable basis or any other constraints are applicable, the same needs to be documented and approved by the Governing Board of the IOS MCN.

The engineering contributions by the member organisation's employees or affiliates will be governed by the corporate contributor licence agreement (CCLA) by the IOS MCN Project. The source code and artefacts will be owned by the IOS MCN and can be licensed or distributed based on its licensing terms and conditions. There cannot be any IPR or ownership claim from the member organisation unless explicitly agreed by the IOS MCN governing board.

## 8. Termination

The membership can be terminated by IOS MCN or the member organisation or mutually. The membership fee will not be refunded in any circumstances. As the membership is subscribed annually, any dues of the year for which the membership is subscribed must be paid completely (even if the termination is initiated)

- a) Initiated by IOS MCN

If the governing board of IOS MCN initiates a termination for any legal or guideline violation, the member organisation will be served a written show-cause notice as the first step with a due date for response. Subsequently the governing board will review and finalise the decision. Once the termination is finalised by IOS MCN governing board, all the official roles and logo of the member organisation will be removed from all IOS MCN channels or committees.

The advance notice time period will be decided by the governing board of IOS MCN based on the severity of the situation. The same will be intimated to the member organisation during the show-cause notice.

- b) Initiated by the member

The member organisation can initiate the termination by writing a termination request letter to the governing board of IOS MCN. Based on the request, the

governing board of the IOS MCN can approve the termination. Once the termination is finalised by IOS MCN governing board, all the official roles and logo of the member organisation will be removed from all IOS MCN channels or committees.

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By signing below, the member acknowledges and agrees that when signed and accepted by the IOS MCN, this agreement represents a binding contract between the parties and commits the applicant to these terms and obligations.

Authorized Representative of Member:

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(Sign with date)

Full Name:

Designation:

Email:

Phone:

Accepted and Approved by IOS MCN (as per the below signatory)

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(Sign with date)

Full Name:

Designation:

Email:

Phone:

## Annexure I

### Member Organization Information

Name	
Registration Number (CIN)	
GST Number	
Type (Corporate/Academia/NPO/Startup/MSME/Government)	
Registered Address	
CEO or Chairman Name and Email	
Number of Employees	
Latest Revenue (Year and Revenue in INR)	

### Governing Board Representative Nomination (CXOs or equivalent)

Name	
Designation	
Email	
Phone	

Note: The Governing Board representative will be communicated with all the notices and other general information (including about the membership). If you want to include, any other contact information, please submit it along with this agreement



Technical Oversight Committee Representative Nomination (CXOs or equivalent)

Name	
Designation	
Email	
Phone	

Membership Payment:

Is a Purchase Order required?

Name of Contact to provide PO #: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Please select a method for receiving invoices:

PDF via email: \_\_\_

Hard copy: \_\_\_

Name of Billing Contact  
for your Participation in the Project:

\_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Billing Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do you have in-kind contribution for the membership free (part / full)? Yes  No

If Yes, please submit IOS MCN Approved "In-kind evaluation document" along with all the details including items/resource with the cost mapping.

Annexure II

IOS MCN - Evaluation Sheet for IN KIND Contributions from Members in lieu of Membership Dues

TYPE of Contribution		UNIT COST	Description	Commitment	Evaluation
Manpower	Architect/Manager	Per annum rate (eg. 24 Lakhs)	Role	Hours/week (eg 25%)	eg.6 Lakhs pa
	Lead	Per annum rate (eg. 24 Lakhs)	Role	Hours/week (eg 25%)	eg.6 Lakhs pa
	Developer	Per annum rate ( eg 12 Lakhs)	Role	Hours/week (eg 50%)	Eg. 6 Lakhs pa
Hardware	Purchase	List Price +AMC	Specification including the age	Number of units	
	Lease	Rental per month	Specification including the age, Terms and Conditions	Number of hours per month/pa	
Software	One time Purchase	List Price + AMC	Specification	Number of units	
	Licencing	License pa	Specification, Terms and Conditions	Number of licenses	
	Pay per use	Rates per unit	Specification	Approx usage pa	

You may attach any additional information for the in kind contribution which can help the IOS MCN Governing board for their final evaluation.