

Network Architecture for AI Ecosystem

Agents ∈ AI ecosystem

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AI ecosystem and network architecture

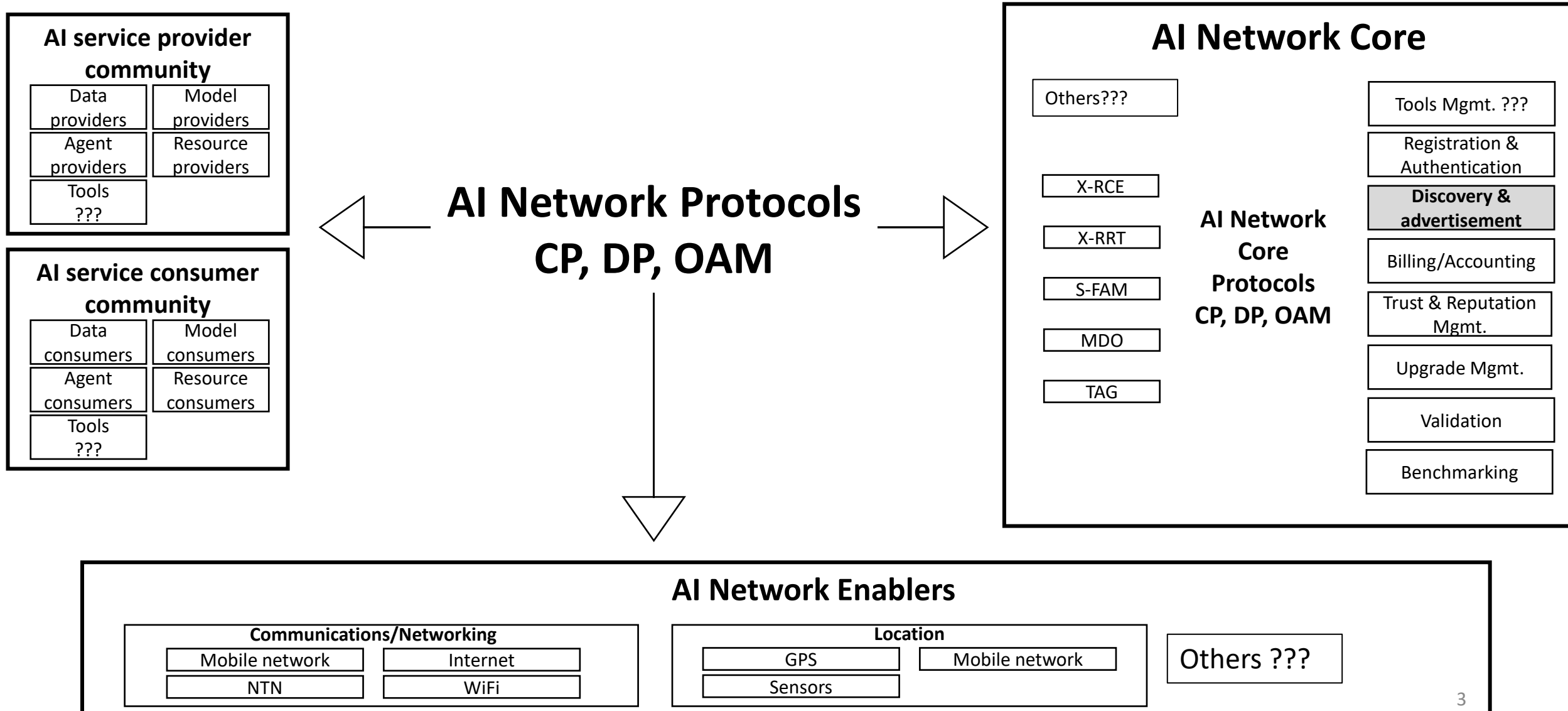
Main purpose of the work is to establish an architecture that

- Supports consumer and provider nature of the AI ecosystem.
- Enables different AI services including Agentic collaborations, Inference, Training, etc.
- Delivers efficient protocols and mechanisms that enable different features and requirements including those from other SDOs.
- Offers a flexible design that can easily evolve and extend.

What we hope to achieve is

- To define a unifying framework for AI services, network, and ecosystem.
- Help distinguish Agentic specific work items from those that agents have in common with other services in AI network.
- Help establish a WG dedicated to agentic work with a focused scope in order to achieve timely deliverables.
- Identify common work items and their respective potential alternative discussion venues.

Consumer-Provider Overlay Network for AI services



IETF Work

Work that might be done in IETF

- Agent specific work:
 - Standardizing agents'/tools' specific entities (e.g. agent cards), communication protocols, session management, APIs, etc.
- AI services common work items:
 - Develop vehicles and mechanisms related to AI network framework such as: CP, DP, OAM, discovery, registration, authentication, authorization, etc.
- Work items specific to each different AI service:
 - Standardizing various specific structures, entities that can become available via the use of the above common vehicles and mechanisms.

Potential IETF venues where the work might be done

- Areas: ART, Others (depending on various work items in AI ecosystem)
- Existing WG: TBD...depending on various work items in AI ecosystem
- New WG: AIPROTO, DMSC, AIDISC, etc.

Work to Date and Future Plans

Side meetings have been held so far

- IETF 122: Initial meeting with small group within the community.
- IETF 123: [Side meeting materials](#)
- IETF 124: [Side meeting materials](#) , [Hackathon materials](#), [NMRG presentation](#), [Agent Discovery via DNS](#)

Existing I-Ds

- [AI Network](#) , [Task-Discovery](#), [AI discovery](#), [Dnsop-dnsaid](#), [Agent-discovery](#), [AI-agent-6g](#), [Use-cases-requirements](#), [Protocol-agent](#), [Agentic AI Architectural Principles](#)

Discussion venues:

- Agent-2-agent, dmsc, side meetings, conference calls, email exchanges.

Plans for IETF 125:

- Side meeting: AI Ecosystem, discovery mechanisms, and discoverable objects.

Future plans: Help establishing a WG for agent work, collaboration and discussion over mailing lists. Potential future drafts, etc.