🗣️ Seminar 4 Summary: Agent Communication

In this session, Dr. Stelios Sotiriadis explored the key principles of **agent communication** within multi-agent systems. The focus shifted from individual agent behaviours to how agents interact and collaborate within **agentic societies**.

Key highlights from the seminar:

- **Introduction to Agent Communication**: The seminar covered the fundamentals of how agents exchange information and coordinate with one another, which is crucial for complex, distributed systems.
- **Speech Act Theory**: A central theme was the **Speech Act Theory**, originating from linguist John Austin. Dr. Stelios explained how agents don't just share data—they **perform actions through communication**, such as requesting, informing, or negotiating.
- **Communication Protocols**: The discussion included various communication languages and standards such as **KQML (Knowledge Query and Manipulation Language)**, **KIF (Knowledge Interchange Format)**, and **ACL (Agent Communication Language)**. These frameworks help define message types, content structures, and the intent behind agent messages.
- **Importance in Multi-Agent Systems**: Agent communication is vital for coordination, task sharing, and conflict resolution. It allows agents to form coalitions, make group decisions, and function effectively in collaborative environments.

The session reinforced the idea that intelligent systems must be able to **understand and respond to language** meaningfully, enabling higher-level cooperation and adaptability in real-world applications.