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A Three Tier Secure KQML Interface with Novel Performatives

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Abstract : Knowledge Query Manipulation Language (KQML) and FIPA ACL are two prime communication languages existing in multi agent systems (MAS). Both languages are more or less similar in terms of semantics (based on speech act theory) and offer cutting edge competition while establishing agent communication across Internet. In contrast to the fact that software agents operating on the internet are required to be more safeguarded from their counter-peer, both protocols lack security performatives. The paper proposes a three tier security interface with few novel security related performatives enhancing the basic architecture of KQML. The three levels are attestation, certification and trust establishment which enforces a tight security and hence reduces the security breeches.

Keywords : multiagent systems, KQML, FIPA ACL, performatives
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