

# PANDA: Specifying Policies for Automated Negotiations of Service Contracts

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**Abstract.** *The Web and Grid services frameworks provide a promising infrastructure for cross-organizational use of online services. The use of services in large-scale and cross-organizational environments requires the negotiation of agreements that define these services. Buying at a fine granularity just when a need arises is only feasible if the costs of establishing new agreements are low. Today, negotiation is often a manual process yet many simple online services would allow full or partial automation. The PANDA approach automates decision-making and proposes to specify a negotiation policy, expressing a party's private negotiation strategy, by combining rules and utility functions. In addition, the decision-making problem can be decomposed into different aspects that can be executed by different interacting decision-makers. Using PANDA for policy specification and negotiation decision-making reduces the costs of setting up new services and contracts. Hence, the use of fine-grained on-demand services becomes feasible.*