

【ABSTRACT】

A service provision method and apparatus for determining approval or non-approval of a plurality of users and providing a service are provided. A service provision apparatus according to an embodiment of the present disclosure includes a memory storing n (n being a natural number equal to or greater than 2) secret keys respectively corresponding to n terminals, the n secret keys being used to execute a service executable by the n terminals jointly, and a processor configured to: transmit an electronic signature request message to a first terminal from among the n terminals to receive a first electronic signature value generated in the first terminal from the first terminal and perform verification of the received first electronic signature value when a service execution request for executing the service is received from the first terminal; transmit an electronic signature request message to terminals other than the first terminal from among the n terminals to receive electronic signature values respectively generated in the other terminals from the other terminals and perform verification of the electronic signature values received from the other terminals when verification of the first electronic signature value is completed; request any one of n secret keys and a message about approval or non-approval of the service execution for the n terminals when verification of the electronic signature values received from the other terminals is completed; check whether n secret keys received from the n terminals are consistent with the n secret keys stored in the memory when secret keys and messages about approval or non-approval are received from all the n terminals within a predetermined time; execute the service when the n secret keys received from the n terminals are consistent with the n secret keys stored in the memory and messages about approval of the service execution are received from all the n terminals; and re-request the secret key and the message about approval or non-approval when the n secret keys received from the n terminals are not consistent with the n secret keys stored in the memory, wherein, when at least one of the electronic signature value, the secret key

value and the message about approval or non-approval is not received from at least one of other terminals within the predetermined time, the processor determines that the service execution request of the first terminal is approved.