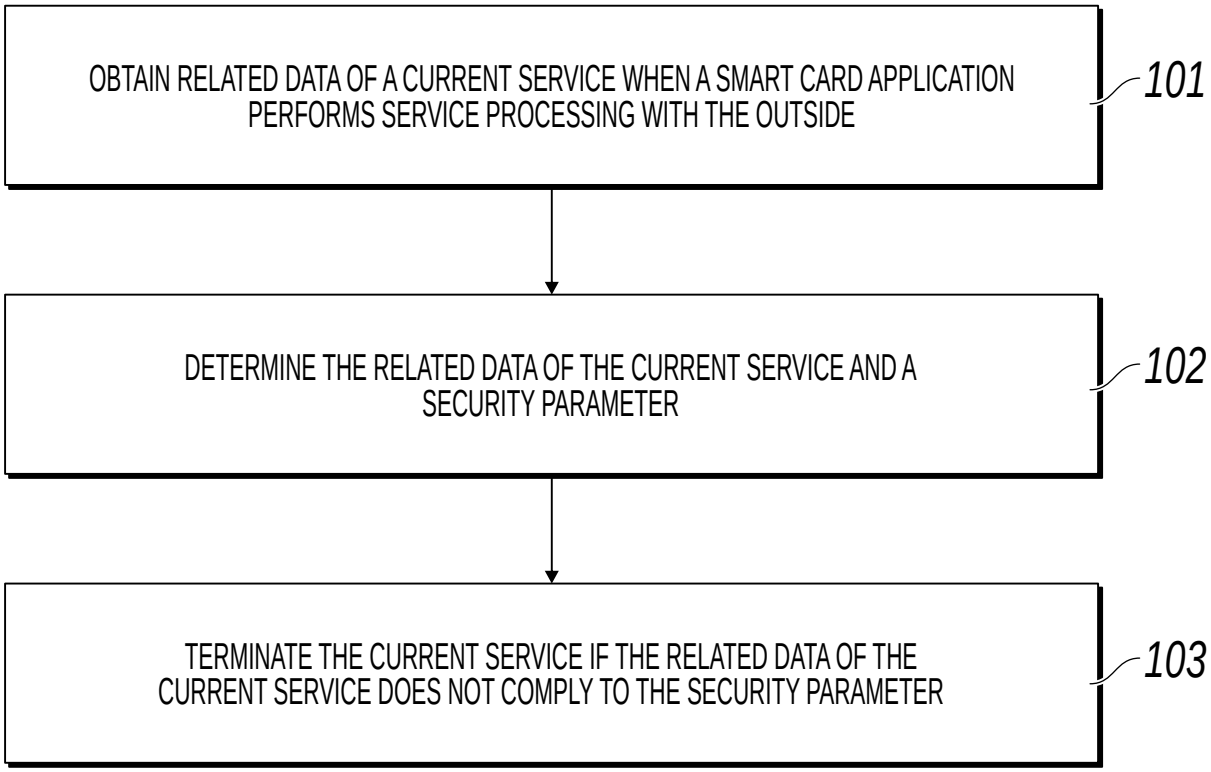
OBTAIN RELATED DATA OF A CURRENT SERVICE WHEN A SMART CARD APPLICATION PERFORMS SERVICE PROCESSING WITH THE OUTSIDE
101
DETERMINE THE RELATED DATA OF THE CURRENT SERVICE AND A SECURITY PARAMETER
102
TERMINATE THE CURRENT SERVICE IF THE RELATED DATA OF THE CURRENT SERVICE DOES NOT COMPLY TO THE SECURITY PARAMETER
103

FIG. 1

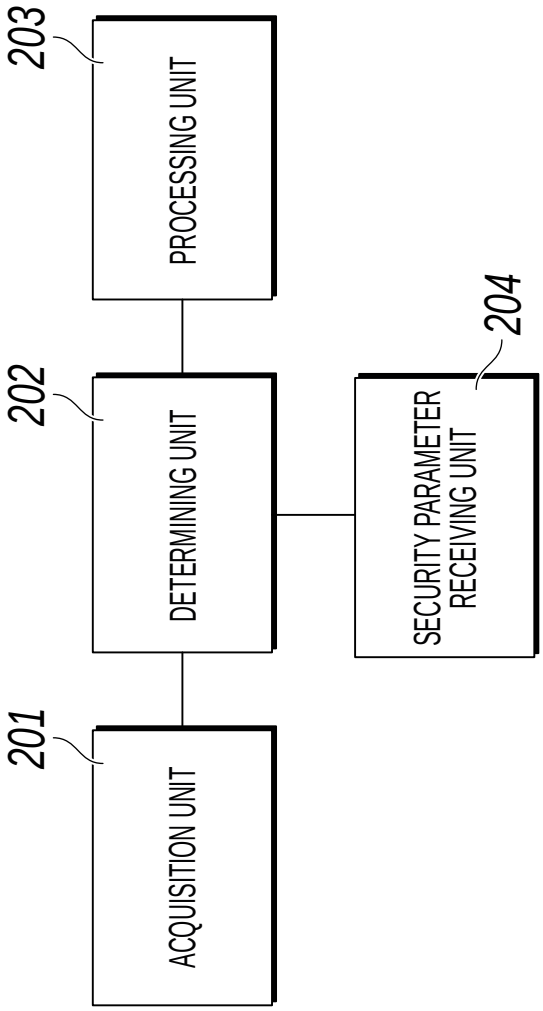
203
PROCESSING UNIT
202
DETERMINING UNIT
204
SECURITY PARAMETER RECEIVING UNIT
201
ACQUISITION UNIT

FIG. 2

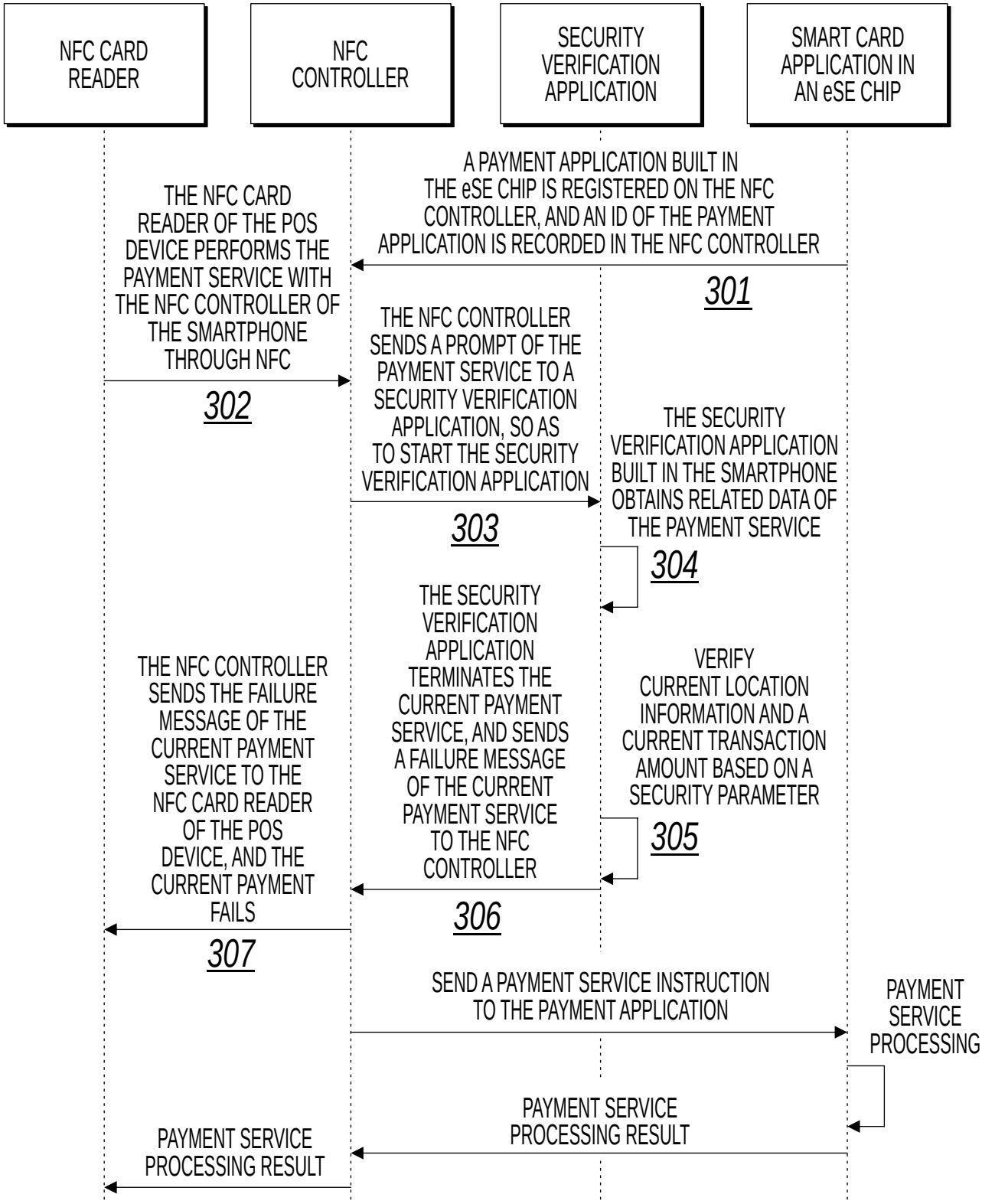
NFC CARD READER
NFC CONTROLLER
SECURITY VERIFICATION APPLICATION
SMART CARD APPLICATION IN AN eSE CHIP
A PAYMENT APPLICATION BUILT IN THE eSE CHIP IS REGISTERED ON THE NFC CONTROLLER, AND AN ID OF THE PAYMENT APPLICATION IS RECORDED IN THE NFC CONTROLLER
301
THE NFC CARD READER OF THE POS DEVICE PERFORMS THE PAYMENT SERVICE WITH THE NFC CONTROLLER OF THE SMARTPHONE THROUGH NFC
302
THE NFC CONTROLLER SENDS A PROMPT OF THE PAYMENT SERVICE TO A SECURITY VERIFICATION APPLICATION, SO AS TO START THE SECURITY VERIFICATION APPLICATION
303
THE SECURITY VERIFICATION APPLICATION BUILT IN THE SMARTPHONE OBTAINS RELATED DATA OF THE PAYMENT SERVICE
304
THE SECURITY VERIFICATION APPLICATION TERMINATES THE CURRENT PAYMENT SERVICE, AND SENDS A FAILURE MESSAGE OF THE CURRENT PAYMENT SERVICE TO THE NFC CONTROLLER
306
VERIFY CURRENT LOCATION INFORMATION AND A CURRENT TRANSACTION AMOUNT BASED ON A SECURITY PARAMETER
305
THE NFC CONTROLLER SENDS THE FAILURE MESSAGE OF THE CURRENT PAYMENT SERVICE TO THE NFC CARD READER OF THE POS DEVICE, AND THE CURRENT PAYMENT FAILS
307
SEND A PAYMENT SERVICE INSTRUCTION TO THE PAYMENT APPLICATION
PAYMENT SERVICE PROCESSING
PAYMENT SERVICE PROCESSING RESULT
PAYMENT SERVICE PROCESSING RESULT

FIG. 3

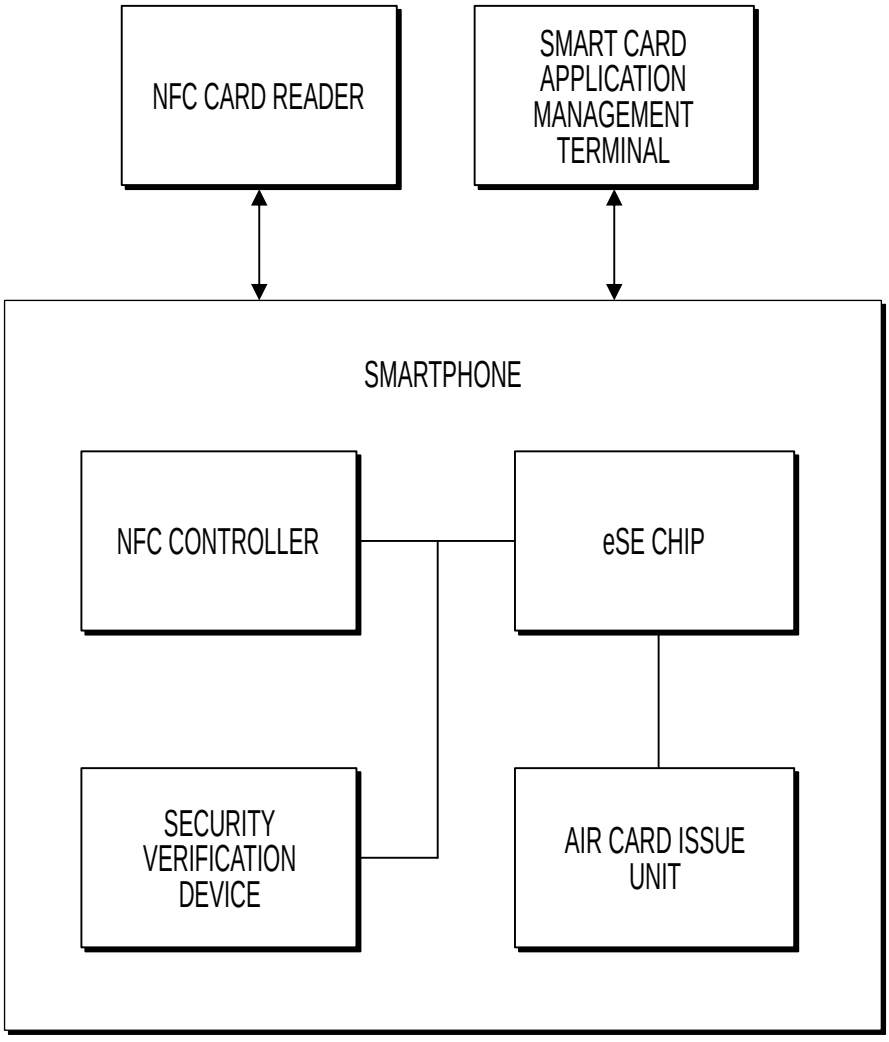
NFC CARD READER
SMART CARD APPLICATION MANAGEMENT TERMINAL
SMARTPHONE
NFC CONTROLLER
eSE CHIP
SECURITY VERIFICATION DEVICE
AIR CARD ISSUE UNIT

FIG. 4

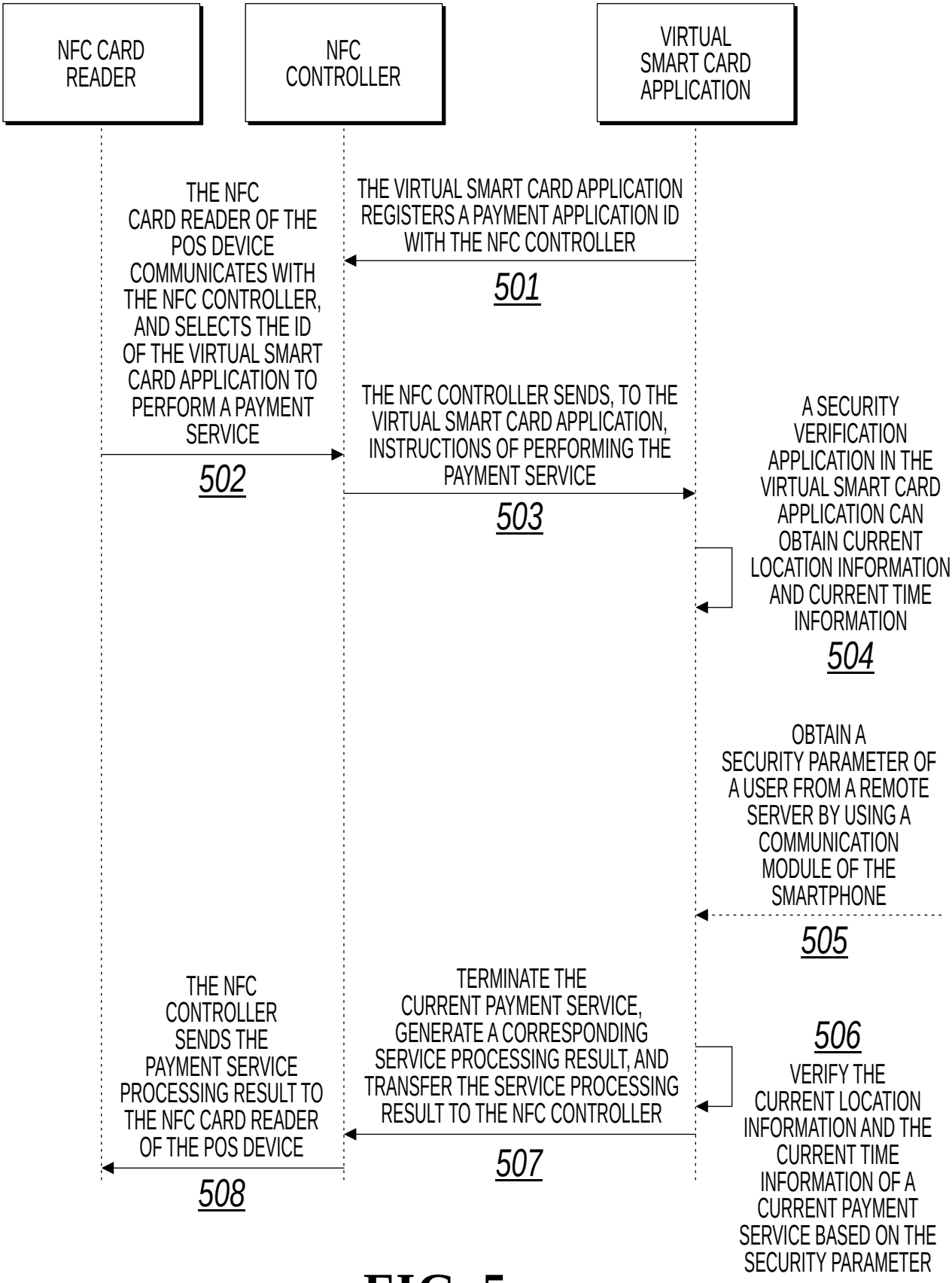
NFC CARD READER
NFC CONTROLLER
VIRTUAL SMART CARD APPLICATION
THE VIRTUAL SMART CARD APPLICATION REGISTERS A PAYMENT APPLICATION ID WITH THE NFC CONTROLLER
501
THE NFC CARD READER OF THE POS DEVICE COMMUNICATES WITH THE NFC CONTROLLER, AND SELECTS THE ID OF THE VIRTUAL SMART CARD APPLICATION TO PERFORM A PAYMENT SERVICE
502
THE NFC CONTROLLER SENDS, TO THE VIRTUAL SMART CARD APPLICATION, INSTRUCTIONS OF PERFORMING THE PAYMENT SERVICE
503
A SECURITY VERIFICATION APPLICATION IN THE VIRTUAL SMART CARD APPLICATION CAN OBTAIN CURRENT LOCATION INFORMATION AND CURRENT TIME INFORMATION
504
OBTAIN A SECURITY PARAMETER OF A USER FROM A REMOTE SERVER BY USING A COMMUNICATION MODULE OF THE SMARTPHONE
505
506
VERIFY THE CURRENT LOCATION INFORMATION AND THE CURRENT TIME INFORMATION OF A CURRENT PAYMENT SERVICE BASED ON THE SECURITY PARAMETER
TERMINATE THE CURRENT PAYMENT SERVICE, GENERATE A CORRESPONDING SERVICE PROCESSING RESULT, AND TRANSFER THE SERVICE PROCESSING RESULT TO THE NFC CONTROLLER
507
THE NFC CONTROLLER SENDS THE PAYMENT SERVICE PROCESSING RESULT TO THE NFC CARD READER OF THE POS DEVICE
508

FIG. 5

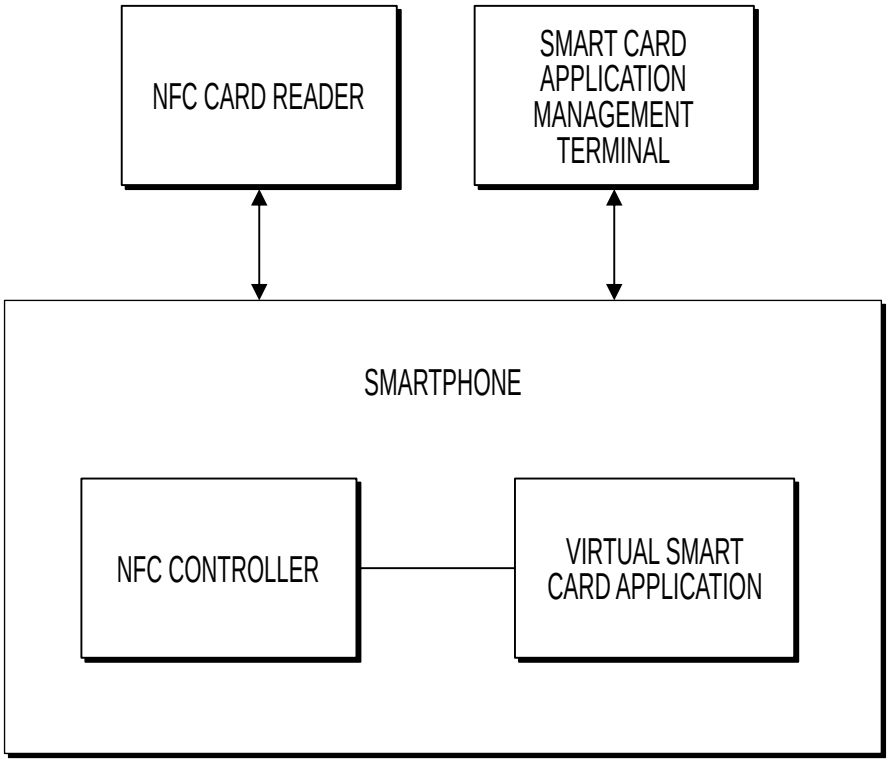
NFC CARD READER
SMART CARD APPLICATION MANAGEMENT TERMINAL
SMARTPHONE
NFC CONTROLLER
VIRTUAL SMART CARD APPLICATION

FIG. 6