

Given the ATM scenario below and draw the event trace (use the example by Rumbaugh in his OMT Text [Chap. 5, pg. 87]) for the User, ATM, Clearinghouse, and Bank give a algebraic specification.

1. ATM asks the user to insert a card
2. User *inserts* a cash card
3. ATM accepts the card and reads its serial number
4. ATM requests the password
5. User enters the *password* "xxxx"
6. ATM verifies the serial number and password with clearinghouse
7. Clearinghouse checks with bank & notifies ATM of acceptance (represents transitions 7a, 7b, 7c)
8. ATM asks the user to select the kind of transaction (withdraw, deposit, transfer, query)
9. User selects *query*
10. ATM asks which account to query (savings, checking, loan)
11. User selects *savings*
12. ATM contacts the clearinghouse with the savings query
13. Clearinghouse contacts the bank with the savings query
14. Bank returns to the clearinghouse an invalid account type
15. Clearinghouse passes this information back to the ATM
16. ATM displays "Invalid Account type. Please select from the following items (checking, loan, cancel)"
17. User selects cancel
18. ATM ejects the card, requests that the card be removed and prints a receipt (represents transitions 18a, 18b, 18c)
19. User takes the card and receipt
20. ATM returns to the main menu "Please insert your card."