CS31A0820 Data-Intensive Systems

Assignment 2:

1. Assume a distributed multidatabase system with no global transaction support. Assume also that there are two sites, each with a (different) EMP relation and an integrity manager that communicates with the component DBMS. Suppose that we want to have a global unique key constraint on EMP. Propose a simple strategy using differential relations to check this constraint. Discuss the possible actions when a constraint is violated.

2. Consider the join graph of Fig. 4.11 and the following information:
   size(EMP) = 150
   size(ASG) = 200
   size(PROJ) = 250
   size(EMP ASG) = 400
   size(ASG PROJ) = 300.
   Describe an optimal join program based on the objective function of total transmission time[1]
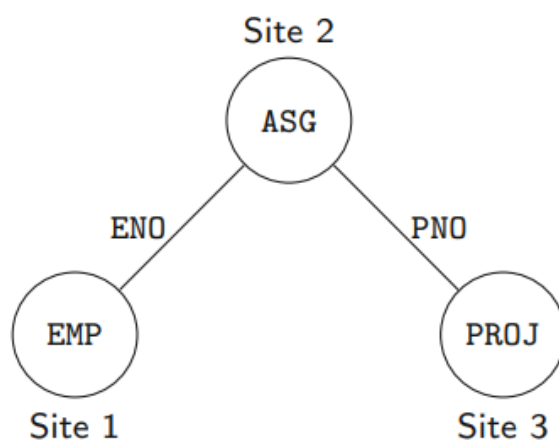

Fig. 4.11 Join graph of distributed query