ER to Relational Model

PR({idPR,ProdLine,ProdDate},{idPR})

ROI({idROI,Quantity,idPR,idRO+idBuyer},{idROI})

null(Batch,idSKU)=⊥

null(ROI,idRO)=⊥

Batch({Quantity,ExpDate,idBatch,idPR,idSKU},{idBatch})

null(Batch,idSKU)=⊥

SKU({idSKU,Ident,itDesc,idMarket,netWeight,grossWeight,caseUPC,Price,prefOrig},{idSKU})

Recursive relation table:

SKU_Multiple({idSKU,idSKU2},{idSKU+idSKU2})

dom(idSKU2) ⊆ dom(idSKU)

SKU_Multiple[idSKU] ⊆ SKU[idSKU]

SKU_Multiple[idSKU2] ⊆ SKU[idSKU]

Id Dependency (RO dependent on Buyer):

RO({idRO,idItinerary,POrder,DeliveryNote,Status,DeliveryAddress,ROdate,idBuyer},
{idRO+idBuyer})

null(idRO,idBuyer) = ⊥

Itinerary({idItinerary,idVehicle,idRO,TranspPrice,DispatchDate,TimeSlot},{idItinerary})

null(Itinerary,idRO) = ⊥

null(Itinerary,idVehicle) = ⊥

Vehicle({idVehicle,idTransp,LoadCapacity,Age,PlateNum,Type},{idVehicle})

null(Vehicle,idTransp) = ⊥

IS-A Hierarchy

SuperClass:

LegalEntity({idEntity,Email,Contact,PersonInCharge,Address,PIB},{idEntity})

SubClasses:

Buyer({idBuyer,idEntity,FinLimit,CasaConto,ManagerOfOperations,idEntity},
{idBuyer,idEntity})

Buyer[idEntity] ⊆ LegalEntity[idEntity]

Transporter({idTransp,idEntity,Fleet},{idTransp,idEntity})

Transporter[idEntity] ⊆ LegalEntity[idEntity]

Laboratory({idLab,idEntity,TypeOfAnalysis},{idLab,idEntity})

Laboratory[idEntity] ⊆ LegalEntity[idEntity]

LegalEntity[idEntity] ⊆ Buyer[idEntity] ∪ Transporter[idEntity] ∪ Laboratory[idEntity]

Buyer[idEntity] ∩ Transp[idEntity] ∩ Laboratory[idEntity] = ∅

Gerund:

Analysis({idAnalysis,idPR,idLab},{idAnalysis,idPR+idLab})

Analysis[idPR] ⊆ PR[idPr]

Analysis[idLab] ⊆ Laboratory[idLab]

PR[idPR] ⊆ Analysis[idPR]

AnalysisReport({idAnalysis,Status,Report},{idAnalysis})

AnalysisReport[idAnalysis] ⊆ Analysis[idAnalysis]

Analysis[idAnalysis] ⊆ AnalysisReport[idAnalysis]