Goal Modeling Tutorial

Goals

→ **What are (Hard) Goals?**

- ⮩ Describe Functions that must be carried out
- ⮩ Are "binary", they can be satisfied or not satisfied.
- ⮩ Examples: Tasks, Confirmable Goals: Raise Profit by 10% in the next year

→ **What are Softgoals?**

- ⮩ Describe something that a stakeholder wants to achieve
- ⮩ Are not really "binary", no strict criteria for satisfaction and denial, judged to be sufficiently satisfied.
- ⮩ Examples: Often "ities": compatibility, usability, affordability, maintainability, etc. But also Low Cost, Reduce _____, Increase _____, etc.

Goal Modeling Tutorial

Links

→ **From a goal to a goal or a softgoal to a softgoal**

  ↳ **AND**

   ➢ All "children" of a softgoal/goal must be satisfied for it to be satisfied

  ↳ **OR**

   ➢ Any of the "children" of a softgoal/goal can be satisfied for it to be satisfied.

→ **From a softgoal/goal to a softgoal**

  ↳ **Contribution Links**

   ➢ **++**   A goal makes (satisfies) another

   ➢ **+**   A goal helps (partially satisfies) another

   ➢ **– –**   A goal breaks (denies) another

   ➢ **–**   A goal hurts (partially denies) another

Review Example: Hotel Checkout System

→ **Current system:**

  ⮑ **The customer's account is updated twice a day with charges including:**
  - ➢ **room charge per day,**
  - ➢ **room service charges (for such things as snacks delivered to one's room)**
  - ➢ **room movie charges (if the customer uses the room's pay-TV)**
  - ➢ **restaurant charges (if the customer dines in the hotel's restaurant and charges the bill to her room)**

  ⮑ **When the customer leaves she is supposed to mention any recent charges, which are then added to the bill and the bill is paid in full.**

→ **Hotel management want to change it because:**

  ⮑ **there are often billing errors, such as:**
  - ➢ **customers leaving without paying some charges;**
  - ➢ **sometimes customers are double-billed because they declare a certain charge, for which they have already been billed.**

  ⮑ **management expects business to grow**
  - ➢ **a major extension to the hotel is being built**
  - ➢ **manual updates of customer records will become problematic**

  ⮑ **So they'd like continuous on-line updates of customer accounts from:**
  - ➢ **the hotel catering service (responsible for room service)**
  - ➢ **the pay-TV system (charge a customer as soon as she starts viewing a movie)**
  - ➢ **and the hotel restaurant (assume there is only one).**

Review Analysis

→ # What are the problems?

↳ Loss of income because of inaccurate and untimely reporting;
↳ Cost of feeding information into the checkout system;
↳ Potential problems with business expansion.

→ # What are the alternatives?

↳ Stay with current batch system;
↳ Stay with current system but increase number of batch updates per day;
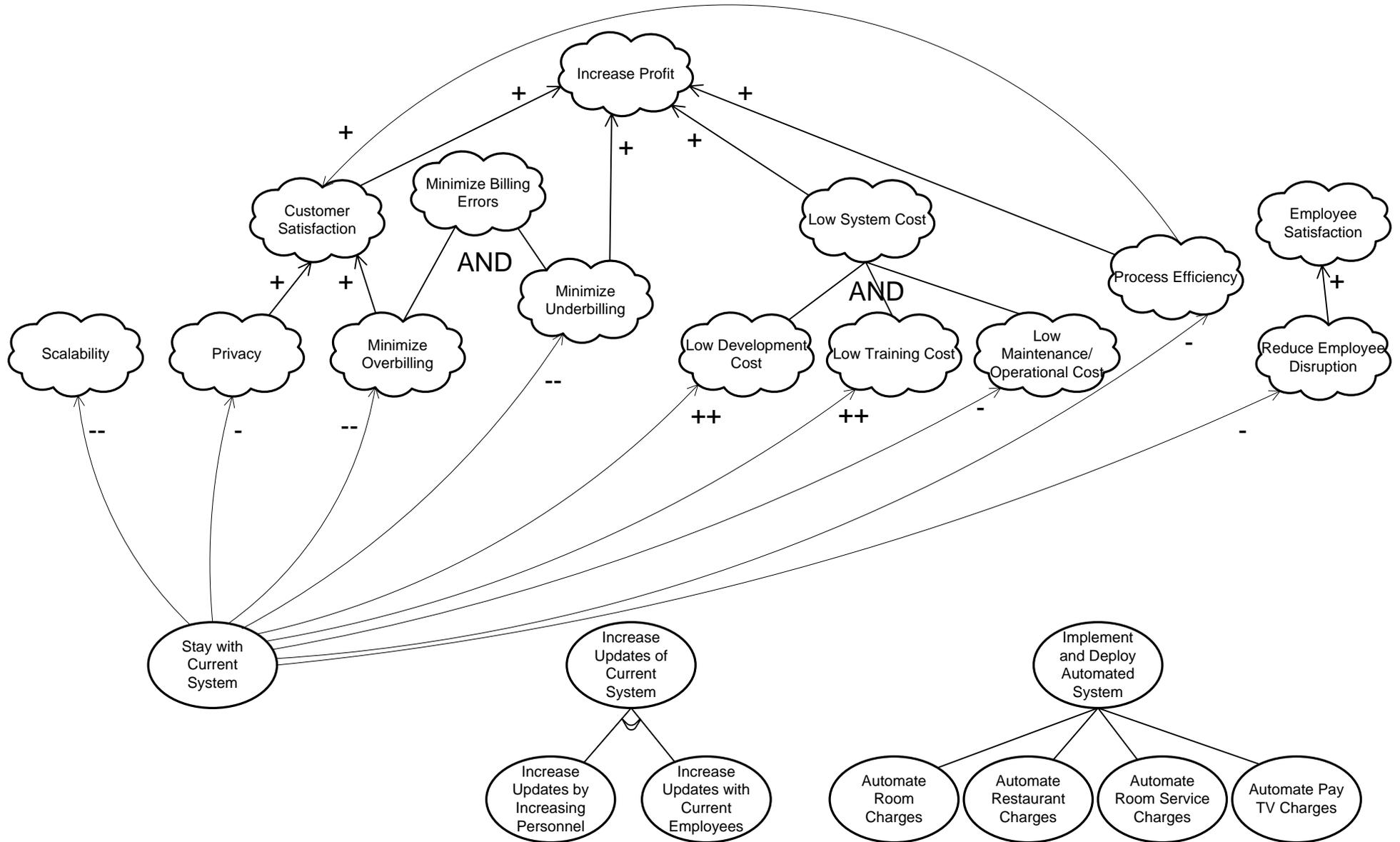↳ Build new on-line check-out system
↳ ...

→ # What are the selection criteria?

↳ Cost (development cost for new system vs operating cost for old system)
↳ Customer convenience/satisfaction;
↳ Reduction of losses due to unreported charges;
↳ ...

→ # What recommendation would you make?

↳ Draw a goal model to help with the analysis! (this tutorial)
↳ Examine Financial Feasibility (last tutorial)
↳ More analysis (activity/statechart, anything extra)
↳ Then make a recommendation...

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Goal Analysis – Stay with current system

Goal Analysis – Increase Updates

Goal Analysis – Automated System

Restaurant	Customer	Hotel Manager	TV Company	Credit Card Company

Request Checkout

*[for each meal]

Add Meal Charges

*[for each day]

*[for each movie]

Add Room Charge

Add Movie Charges

Print Bill

Pay Bill

payment method

Pay Cash

Pay with Credit Card

Process Payment

[approved]

Mark Bill Paid