

TIM 80C Lecture 10 4-28-16

Agenda

- (1) Course Roadmap
- (2) Financial Strategy
- (3) Project Phase II meetings,
ON (Tues, Wed next week)
- (4) Homework 3
- (5) Midterm Review

(1) Course Roadmap

Course has 4 main parts:

- ✓ - product strategy
- ✓ - market strategy
- ✓ - Business (competitive) strategy
- Financial strategy

5 week left in class!

Financial strategy - 2-3 weeks

Integration - 1 week

* Project Presentations - 1 week (10)

Guest Speaker - 1 class

* END PRODUCT FOR CLASS: COMPLETE
Business Plan for your start-up

- create a "real" version of
your start-up

- "sell" the idea / business plan

(2) Financial Strategy

There are 2 main parts to financial strategy:

- (1) Cash Flow Analysis - typically 3-5 years into the future
- (2) Funding Strategy - to obtain the cash for all the costs ("negative cash flows")
 - facilities, hiring people, product development, manufacturing, marketing, etc.

Separation Principle

- (1) First do the cash flow analysis.
- (2) Then do the Funding Strategy based on the cash flow analysis.

Rationale: don't let the presence or lack of funding influence the cash flow analysis.

③ Project Phase 2 - meetings
will happen on Tues/Wed.

④ Homework 3
Embedding the Q in structured
problem solving

Ex: Q1

(1) Define the problem

Present a step-wise
procedure for designing
a new product.

(2) Plan: I will list the
steps presented in TIMSOC

(3) Plan execution:

- step 1...
- step 2...
-

(4) Check work - the work is
accurate.

(5) Learning / Conclusions:
This is a basic approach that
can be modified as needed.

(5) Midterm Review

Doing HW 3 is good preparation for the midterm!!

HW 3 Q1

Conceptual Design Process

step 1: State the overall objective of the new product

step 2: Dissect existing products that are similar to the desired product

step 3: Create a Function Structure for the new product

step 4: Create a morphological matrix of the possible solution-principles for realizing the Function-Structure

step 5: Use the Morphological Matrix to generate several (2-5) possible design concepts

step 6: Briefly describe them

(This step 4 merges steps 4 & 5 from lecture 4)

Step 7: Create a set of selection criteria and apply them to select a design concept

Step 8: select the chosen design concept

Q1 part 2

Step 1: Overall purpose (primary function):

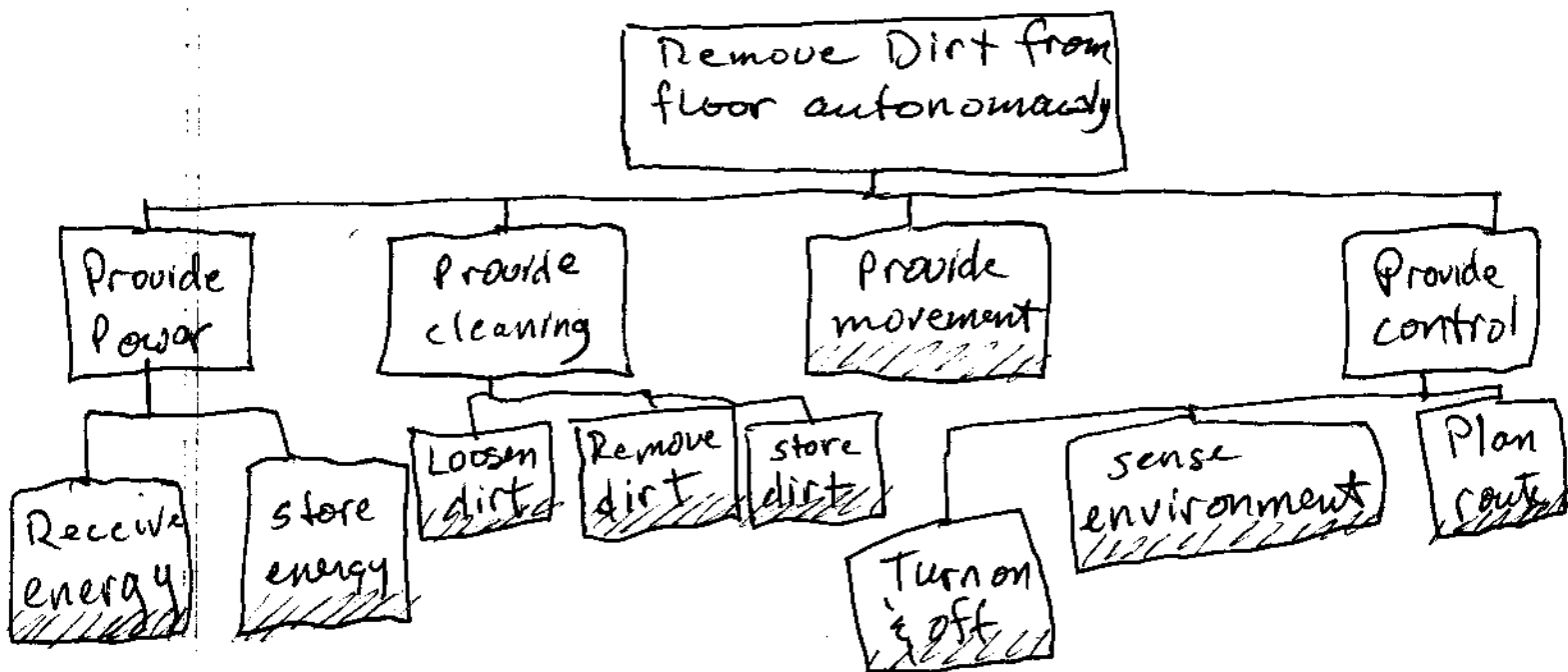
An inexpensive robot for cleaning floors in the home

Step 2: dissection

- Roomba

- Generate a FAST DIAGRAM

Step 3: Function Structure



STEP 4 Morphological matrix

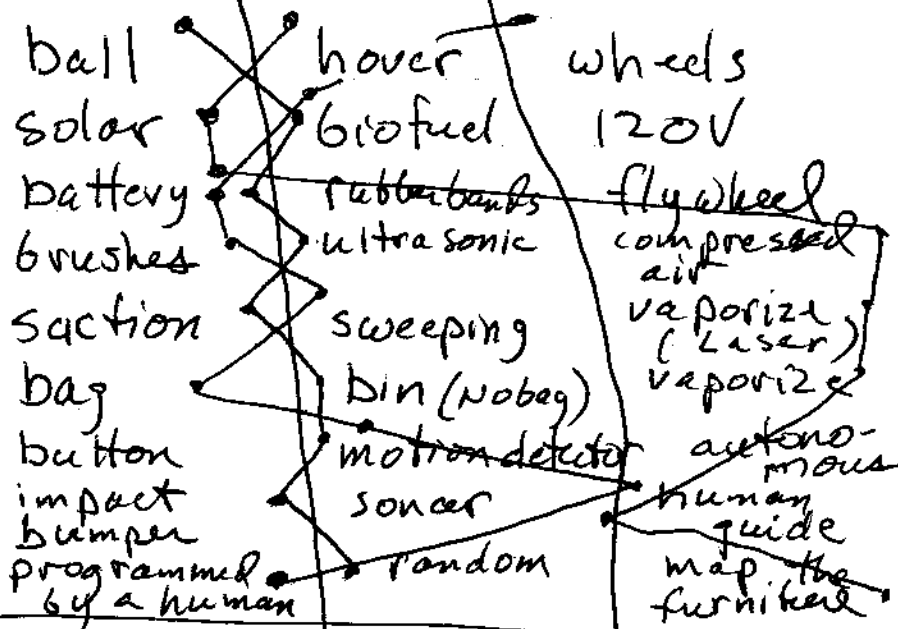
sub-functions

Provide movement
 receive energy
 store energy
 loosen dirt
 remove dirt
 store dirt
 Turn on & off
 sense environment
 plan Route

SP1

SP2

SP3...



③

②

①

Step 5: design concepts

Step 6 - brief descriptions

Step 7 Selection criteria

Criteria	Concept 1	Concept 2	Concept 3
Price to customer	2	3-4	2
technical feasibility	3	4	2
Performance (cleaning)	5	3	4
Energy efficiency	1	3	4
Commercialization potential	3	4	1-2
1 is low or "bad" 5 is high or "good"	14	17-18	13-14

Step 8: Concept 2 is the superior design.

After class extra notes follow:

- These 8 steps differ from the 9 steps found in lecture 4 because step 4 from the ^{earlier} lecture is left out.

Steps 4 & 5 ~~are~~ from Lecture 4 are merged here into Step 4. For the MIDTERM, the 8-step approach here might make more sense, but either is acceptable.

HW 2 PT1 Steps:

Market Strategy Process (Approach):

Step 1: Identify the Industry/Market

Step 2: Determine the total size & growth rate of the market

Step 3: Create a revenue map:
- customer segmentation
- product segmentation

Step 4: Decide which cell(s) of the revenue map to target

Step 5: Create a marketing mix for each of the targeted cells.

HW 3 part 3.1: Business (Competitive) Strategy Process - Approach

Step 1: Create a map of the Industry/Market landscape

- competitors
- new entrants
- substitute products
- buyers
- suppliers

Step 2: Perform a Porter's Five Forces Analysis of the Industry/Market

- rivalry between competitors
- threat of new entrants
- threat of substitute products
- Buyer power
- supplier power

Step 3: Place competitors on a 2x2 competitive strategy matrix

Step 4: Select a competitive strategy.

- differentiated
- cost leadership
- focus