Name: Class or Set
Date: 9/15/15

Systems Analysis: Conceptual Architecture Diagram

After completing this activity you will be able to:
- Interpret a conceptual architecture diagram
- Construct a simple conceptual architecture diagram

Step 1: Individually
Reference the conceptual architecture diagram shown on screen. Prepare 3 questions that can be answered with the diagram:
1. *Who are the users? (A: Agents)*
2. *How do they provide their information? (A: Browser)*
3. *Is there any batch feeds required? (A: Yes into the reporting database)*

What is a question about the process that cannot be answered with the diagram?
1. *Who does what and when?*

Step 2: In small groups.
Discuss your questions (and answers).

Step 3: In small groups, consider the following scenario
This year the prestigious Temple Team Tiddlywinks Tournament has asked you to run a Prediction Contest. There are 6 teams in the Tiddlywinks Tournament. Each team plays every other team twice (total of 10 matches per team). In the Prediction Contest, before each of the 10 match rounds, a predictor can predict the 3 match outcomes. A predictor receives 1 point for predicting the correct outcome and 3 more points for predicting the margin of victory. Your job as Prediction Contest Director is to track predictions, determine scores for each prediction, and track scores per round and overall.

1. There are at least two roles involved in the Prediction Contest. Name them.
   - Predictor
   - Predictor Contest Director (PCD)

2. Decide how predictions can be submitted (e.g., email, phone app, web form). Decide how results will be communicated.
   - Submitted: web form
   - Communicated: web page + email

3. There are multiple discrete processes involved. Identify the major processes.
   - Predictor input predictions
   - PCD input scores
   - PCD determine scores for each prediction
   - Publish the results

4. What data needs to be stored? How would you store it?
   - Predictions
   - Scores for each game
   - Scores per round and overall

Step 4: Discuss as a class

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Step 5: In small groups.

Based on the consensus class response, prepare a conceptual architecture diagram for the Prediction Contest.

- Users
- Delivery Mechanism
- Application
- Services
- Resources
- Predictors
- Browser
- PCD
- Tournament System
- Calculate Score
- Database

Step 6: Answer four short-answer questions (individually)

1. When you think a conceptual architecture diagram is most useful?
   When communicating the architecture to non-technical audiences, such as management, marketing and users.

2. Compare and contrast the conceptual architecture diagram and the entity relationship diagram.
   - ERD shows relationship between data (entity attributes)
   - Conceptual architecture diagram shows a conceptual view of the system including how the information flows

Step 7: Rate this activity (individually)

<table>
<thead>
<tr>
<th>Ratings</th>
<th>1 Completely Disagree</th>
<th>□ Somewhat Disagree</th>
<th>3 Neutral</th>
<th>4 Somewhat Agree</th>
<th>5 Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
<td>Rating (1 to 5)</td>
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<tr>
<td>This is an engaging activity.</td>
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Step 8: Submit completed activity sheet
Reading Symbols

After completing this activity you will be able to:
- State characteristics of an effective symbol

Background


A symbol is an object that represents, stands for, or suggests an idea, visual image, belief, action, or material entity. Symbols take the form of words, sounds, gestures, or visual images and are used to convey ideas and beliefs. For example, a red octagon may be a symbol for "STOP". […]

Semiotics is the study of signs, symbols, and signification as communicative behavior. Semiotics studies focus on the relationship of the signifier and the signified, also taking into account interpretation of visual cues, body language, sound, and other contextual clues. Semiotics is linked with both linguistics and psychology. Semioticians thus not only study what a symbol implies, but also how it got its meaning and how it functions to make meaning in society.

Step 1: Form 10 teams (2-3 people each)

My Team Number is _______. You must have at least one person who has a device capable of taking photographs and emailing them to the professor.

Step 2: Field Trip

As a team, look around Alter and Speakman Halls (inside or outside) for a variety of symbols (8-10) and take a photo of each. For each symbol document the following:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Context</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit sign</td>
<td>In classroom</td>
<td>Leave the area</td>
</tr>
<tr>
<td>ATM</td>
<td>Lobby</td>
<td>Ability to get $$</td>
</tr>
<tr>
<td>Fire Alarm</td>
<td>Hallway</td>
<td>Safety</td>
</tr>
<tr>
<td>Hazard Diamond</td>
<td>On locked door</td>
<td>Enter with caution</td>
</tr>
<tr>
<td>Female person</td>
<td>On each floor</td>
<td>Female, Bathroom</td>
</tr>
<tr>
<td>Recycle sign</td>
<td>On trash can</td>
<td>Recycle items only</td>
</tr>
<tr>
<td>Cigarette</td>
<td>Outside near bench</td>
<td>Able to smoke in that area</td>
</tr>
<tr>
<td>Temple [?]</td>
<td>On top of building</td>
<td>&quot;T&quot; represent temple University</td>
</tr>
<tr>
<td>Speed Limit</td>
<td>On the road</td>
<td>Ensure safe limit of speed</td>
</tr>
<tr>
<td>Pepsi symbol</td>
<td>For sale in cafeteria</td>
<td>Board of soda</td>
</tr>
</tbody>
</table>

Return to the classroom promptly by the agreed upon time of 6:40 (15 min)
Step 3: Return and Discuss

After reviewing your choices, pick the ones that best meet these criteria:

1. Which symbol is most context-specific? That is, the meaning of the symbol would change if it appeared in a different context.

   ![Sign (temple)]

2. Which symbol is most universal? That is, it is most likely to be understood (with similar meaning) by a wide variety of people, context, and situations.

   ![Handicap symbol]

3. Which symbol is most effective? That is, it a simple symbol yet conveys an unequivocal meaning.

   ![Exit sign]

Step 4: Submit

Once you have made your selections in Step 3, email your photo to the professor with a subject line of “Team XX – Photo #” where XX is your team number and # corresponds with the question #. (1, 2, 3)

Step 5: Discuss as a class.

Step 6: Answer individually

1. What kinds of visual metaphors are the most effective? Which are least effective? Those that don't depend on a context to be understood. For example: EXIT sign

2. What is something you learned in this activity?

Step 7: Rate this activity (individually)

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