New Informatic Model for Identifying Urban Plant Problems

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An informatic application is being developed to aid urban field biologists, environmental educators, students and residential homeowners in the identification of common disease, stress and pest problems of landscape trees and shrubs. The application utilizes the Symbiota Identification Key, a PHP/MySQL platform-independent web application that was developed to integrate a number of datasets to aid in plant identification. For this application, the user first views a list of common plant problems based on geographical criteria (in this case the Phoenix, Arizona metropolitan area). Once an initial checklist is assembled, the application allows users to select from a list of common symptoms and signs they may observe on landscape trees and shrubs. The program uses this information to reduce the number of possible identifications. Possible identifications for the user's problem are determined through browsing images and additional descriptive data. Links to other websites will provide additional information about each problem including management options.

Interactive Plant Problem Key
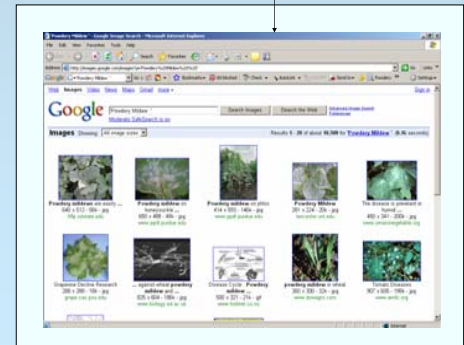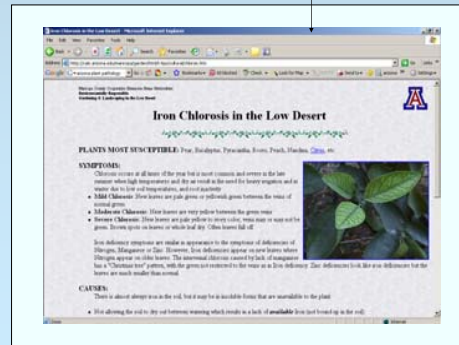
Step 1. Select Geographic Area
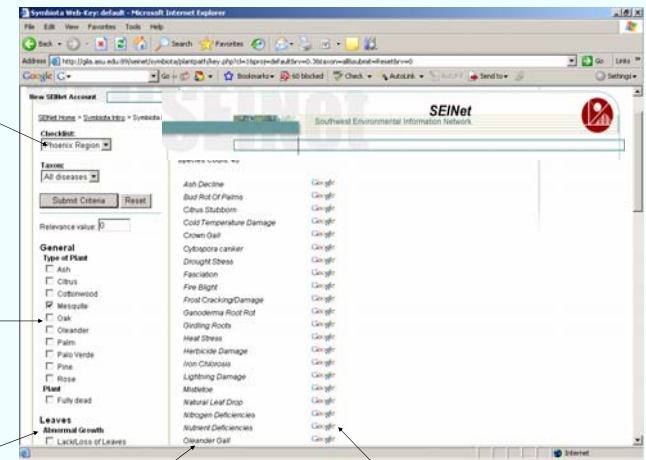
Step 2. Reduce number of possible identifications by using plant species

Leaves
 Wilting
 Browning
　Brown Tips/Edge
　Entire Leaf Brown
 Fuzzy/Fungal Appearance
　White
 Leaf Not Flat
　Curling
　Puckering
 Yellowing
　Abnormal Yellow Patterns
　Entire Leaf Yellow
　Yellow Tips/Edge
　Yellowing Between Veins
Branches and Trunk
 Abnormal Growth
　Flat and Curved Stems
　Galls (Tumor-Like Structures)
　Mistletoe
　Mushroom-Like Growth
　Witches Brooms
 Dead Bark/Wood
　Cankers (Sunken Dead Areas)
　Cracking/Missing Bark
　Rotten Wood
 Fuzzy/Fungal Growth
　Black
 Holes
　Rows Of Holes
 Wet/Oozing Appearance
　Black/Brown Slime Oozing
　Orange Slime Oozing
　Wet Bark Appearance
　Wet Wood Appearance
Roots
 Abnormal Growth
　Galls (Tumor-Like Structures)
 Brown Roots
　Rotting

Step 3. Select from list of possible symptoms and signs to further reduce possible identifications

Step 4. Clicking on a disease or abiotic problem will open a link to existing profile page.

Step 5. Clicking on the Goggle symbol will open a Google image page for the problem