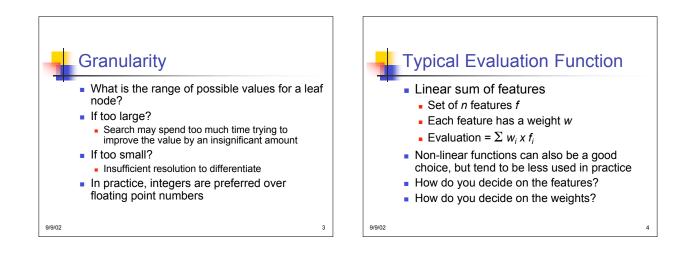


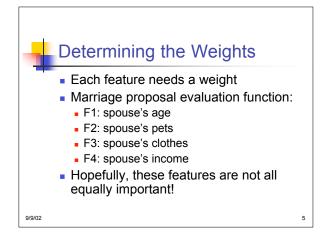
Value of a Leaf Node

- What value do you assign to a leaf node?
- If you have perfect information, then life is easy (leaf node becomes a terminal node)
- Otherwise, need to assign a heuristic value to the node
- Heuristics value must be correlated with the true value
 - The stronger the correlation, the more useful the heuristic

2

9/9/02

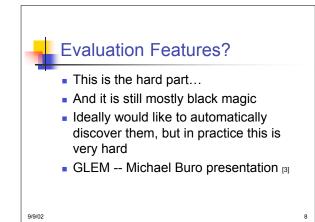






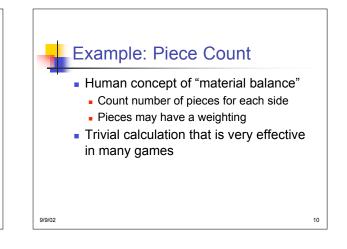
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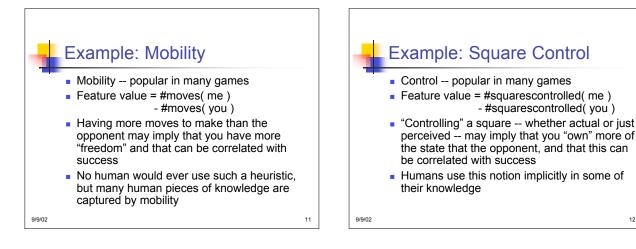
TDLeaf [2]
Start with an initial set of (random) weights
Play a game
Want to modify the weights so that the Move *i* search is a better predictor of Move *i*+1 search result
For each position, find the leaf node of the principal variation (the one responsible for the value at the root).
Small change to weights so that the position's value is closer to the next search's value

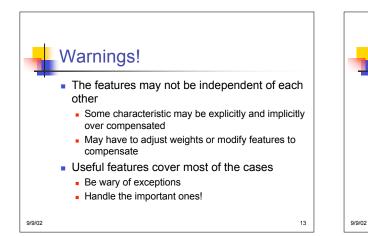


6









Odd/Even Effect

- Iterating one by one depth at a time can cause an unstable search
- Searching to an odd depth can produce an optimistic result (why?)
- Searching to an even depth can produce a pessimistic result (why?)

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Should you be mixing optimistic and pessimistic results?

Odd/Even Effect Might see search look like this Depth 4 • M1 = 20 • M2 = 25 Depth 5 Best move keeps changing • M2 = 12 resulting in a much larger • M1 = 13 search tree being built Depth 6 • M1 = 23 • M2 = 30 9/9/02 15

