NLP
Introduction to NLP

Alternative Formalisms for Parsing
Parsing with Finite-State Automata

• Shallow parsing, chunking
• Useful for information extraction
  – noun phrases, verb phrases, locations, etc.
• Example
  – FASTUS (Appelt and Israel, 1997)
• Sample rules for noun groups:
  – NG → Pronoun | Time–NP | Date–NP
  – NG → (DETP) (Adjs) HdNns | DETP Ving HdNns
  – DETP → DETP–CP | DETP–CP
Sample FASTUS Output

Incident: Date 19 Apr 89
Incident: Location El Salvador: San Salvador (CITY)
Incident: Type Bombing
Perpetrator: Individual ID "urban guerrillas"
Perpetrator: Organization ID "FMLN"
Perpetrator: Organization Suspected or Accused by Authorities: "FMLN"
Confidence
Physical Target: Description "vehicle"
Physical Target: Effect Some Damage: "vehicle"
Human Target: Name "Roberto Garcia Alvarado"
Human Target: Description "attorney general": "Roberto Garcia Alvarado" "driver" "bodyguards"
Human Target: Effect Death: "Roberto Garcia Alvarado" No Injury: "driver" Injury: "bodyguards"
NLP