

## **PAPER OUTLINE FOR ANY KBES APPLICATION XXXXX**

When you read a KBES paper try to address the following issues regarding the expert system described. You may use these as your document headings or your powerpoint headings.

### **ABSTRACT**

### **INTRODUCTION**

- General description/Problem statement
- Motivation for using KBES for XXX
- Objectives, scope and limitations

### **METHODOLOGY/APPROACH**

#### **Identification**

- (problem definition
- subtasks
- data
- important terms and interrelationships
- aspects of human expertise
- assumptions
- justification
- resources
- logical design)

#### **Conceptualization/Knowledge representation scheme**

- available data and their characteristics
- what is given and inferred
- underlying models of the process
- names of subtasks and strategies
- subtask and hypotheses selection
- granularity and structure of concepts and entities
- how concepts are linked to form hypotheses
- hypotheses space
- facts
- assertions
- beliefs
- constraints
- relations between objects of domain
- hierarchical descriptions
- causal relations
- problem solving strategy
- decision rules
- procedures
- information flow
- line of reasoning
- convergence of evidence
- **Knowledge acquisition**
- **Formalization/Organization of knowledge base**  
(mapping of key concepts and strategies into the formal representation of a certain EST)
- **Knowledge Engineering Environment feature**
- **System Design** (Knowledge base
  - Objects
  - Frames
  - Rule base

Inference Engine)

- **Inexact reasoning/Uncertainty handling (if appropriate)**
- **Implementation -- what language is used on what platform?**  
(testing the adequacy of the formalization and of the basic underlying ideas coding/programming related issues)

#### **DISCUSSION OF RESULTS**

- System Input
- Output
- Solution
- Verification and testing
  - (weakness in KB or IE
  - I/O problems
  - inference rules:
    - incorrect
    - inconsistent
    - incomplete
    - missing
  - control strategies
  - poor test examples)

#### **SUMMARY/CONCLUSIONS**