



# Sketch Interpretation Using Multiscale Models of Temporal Patterns



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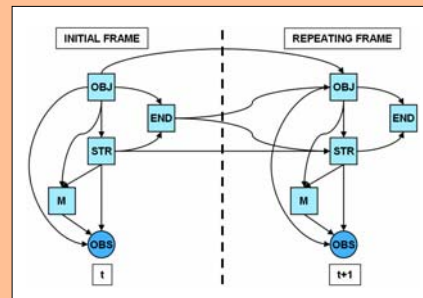
## ABSTRACT

Previous work in sketch recognition has shown that in certain domains, stroke orderings used in the course of drawing individual objects contain temporal patterns that can aid recognition. We build on this work to show how sketch recognition systems can use knowledge of both common stroke orderings and common object orderings. We describe a statistical framework based on Dynamic Bayesian Networks that can learn temporal models of object-level and stroke-level patterns for recognition.

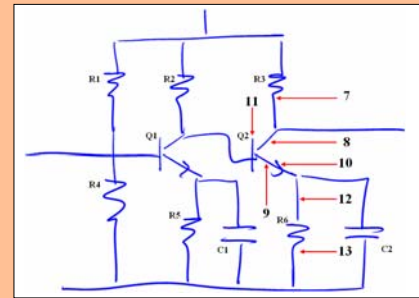
## GOALS

- Model temporal patterns at multiple scales
  - Stroke-level patterns
  - Object level patterns
- Do it efficiently

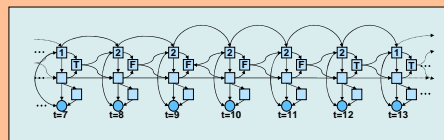
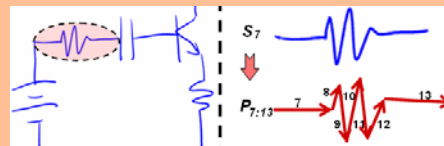
## The Model



## The Data



## Recognition



## FEATURES

Our recognition framework supports:

- Multi-object strokes
- Multi-stroke objects
- Real-valued feature representations
- Numerically stable inference

## RESULTS

