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UNIVERSITÀ DEGLI STUDI DI  
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# Improving the Performance of Thinning Algorithms with Directed Rooted Acyclic Graphs

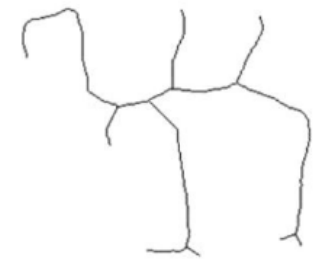
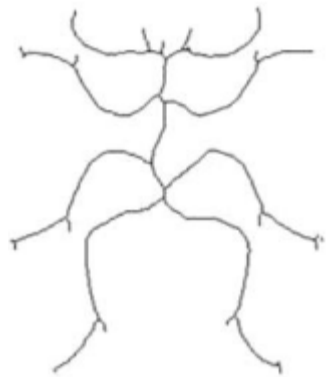


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# Improving Thinning Algorithms with DRAG

- Thinning provides an approximate representation of the objects inside images.



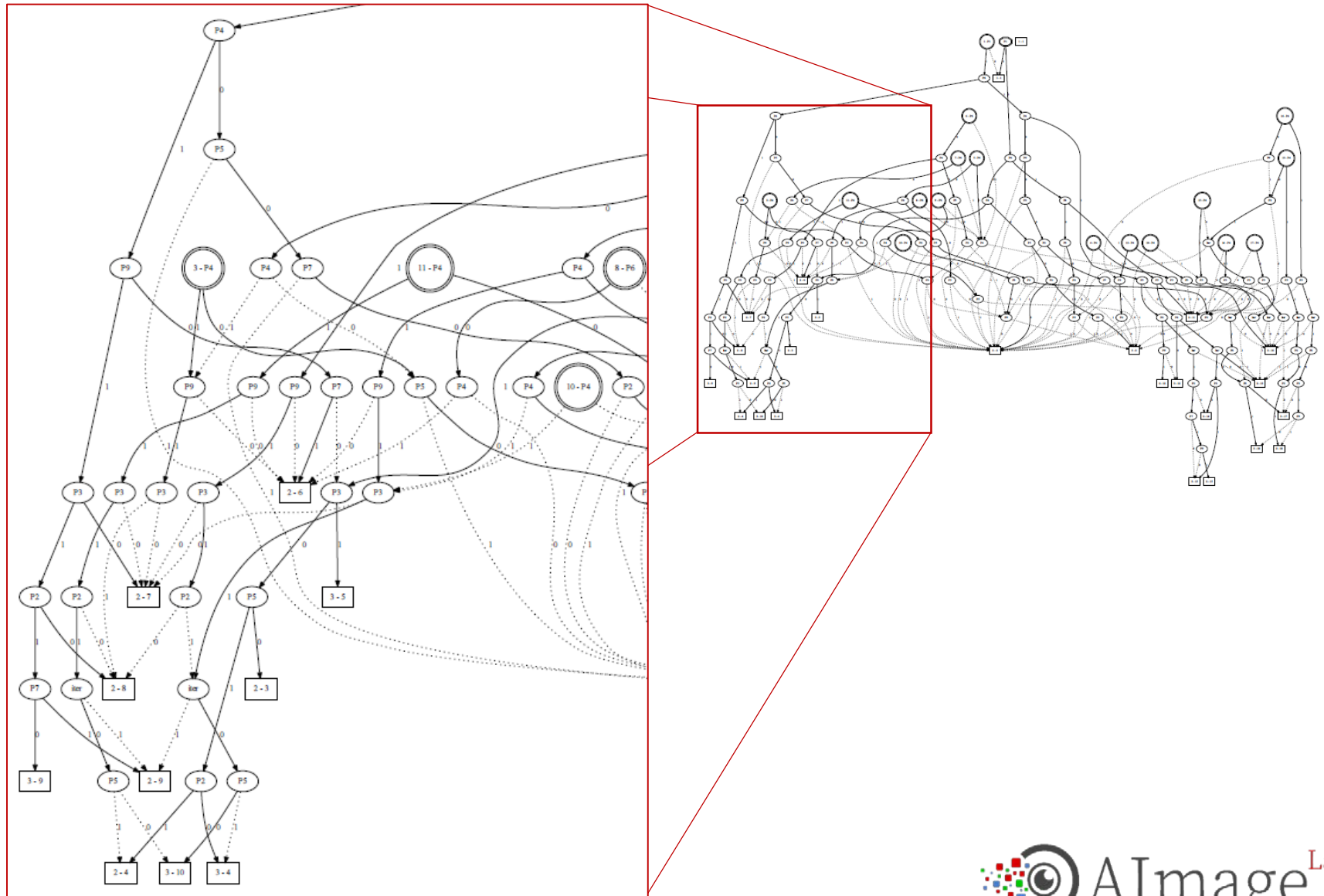
# Improving Thinning Algorithms with DRAG

- A lot of approaches have been proposed to improve performances:
  - Look-Up Tables (LUT);
  - Efficient neighborhood exploration based on Decision Trees;
- What is missing?

$P_9$	$P_2$	$P_3$
$P_8$	$P_1$	$P_4$
$P_7$	$P_6$	$P_5$

$P_9^X$	$P_2^X$ $P_9^Y$	$P_3^X$ $P_2^Y$	$P_3^Y$
$P_8^X$	$P_1^X$ $P_8^Y$	$P_4^X$ $P_1^Y$	$P_4^Y$
$P_7^X$	$P_6^X$ $P_7^Y$	$P_5^X$ $P_6^Y$	$P_5^Y$

# Improving Thinning Algorithms with DRAG



# Improving Thinning Algorithms with DRAG

- We applied this strategy to three different state-of-the-art thinning algorithms and evaluated their performance with the open source C++ benchmarking system THeBE (github/prittt/thebe).

