Shoots Counting System based on SegNet

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[*1] Tokai University

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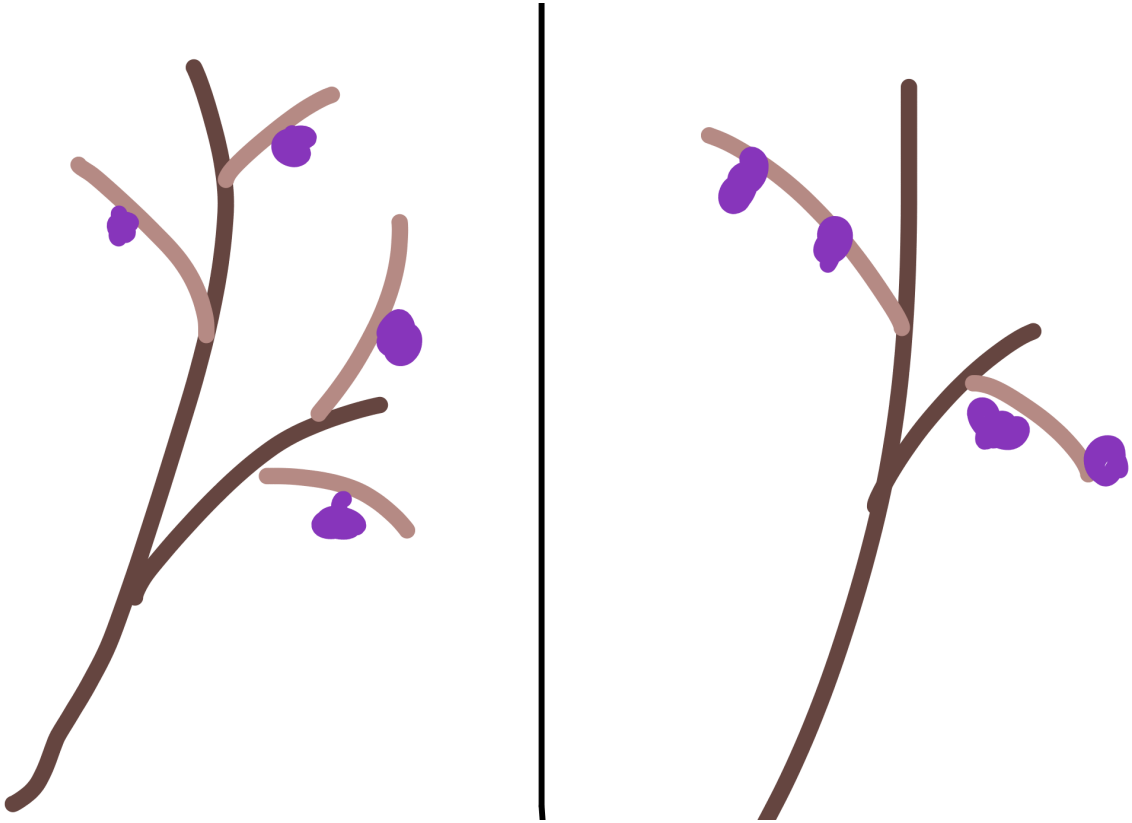
Profile

Name Funa Ito.

Affiliation Tokai University Bachelor degree program.

Back Ground



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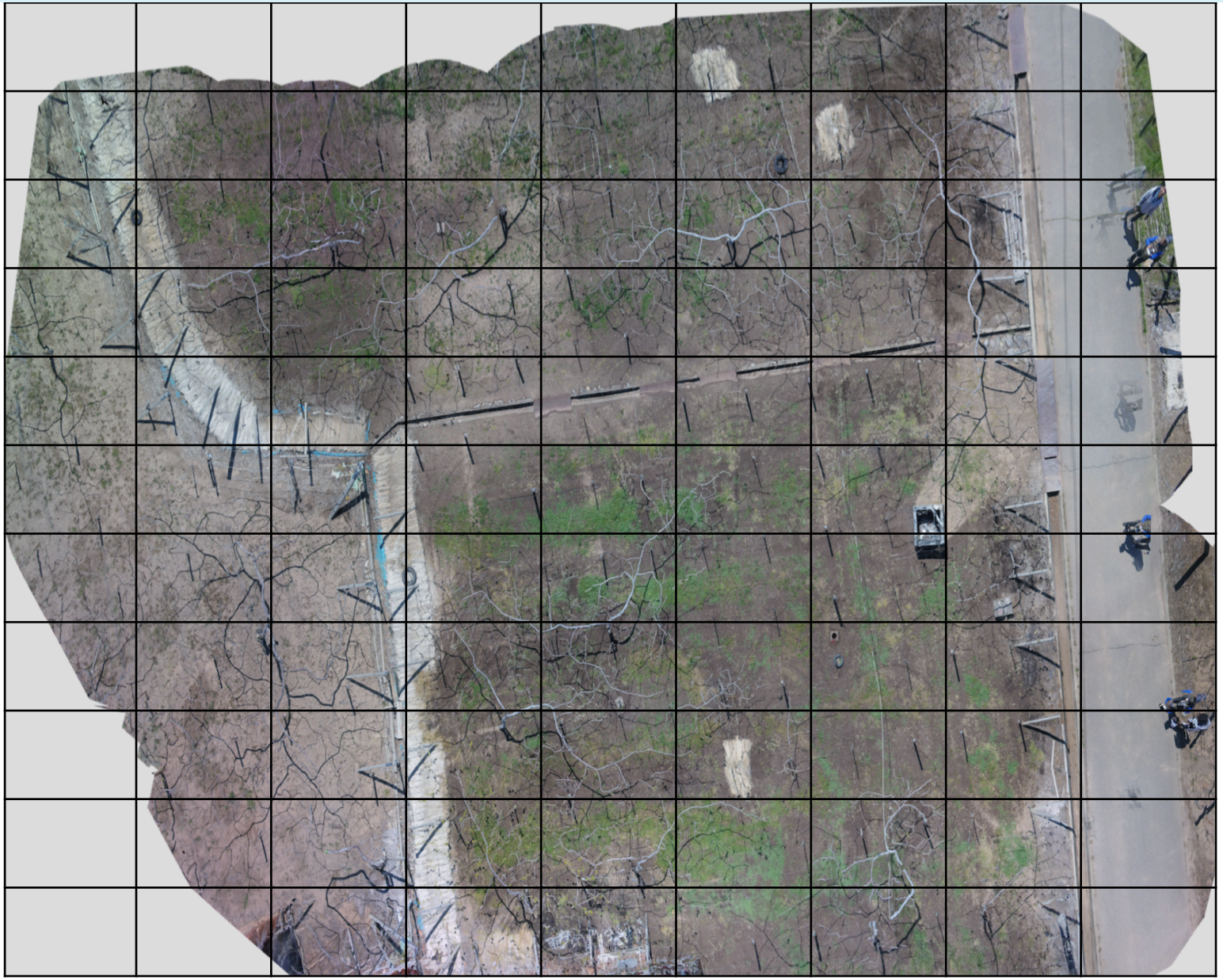
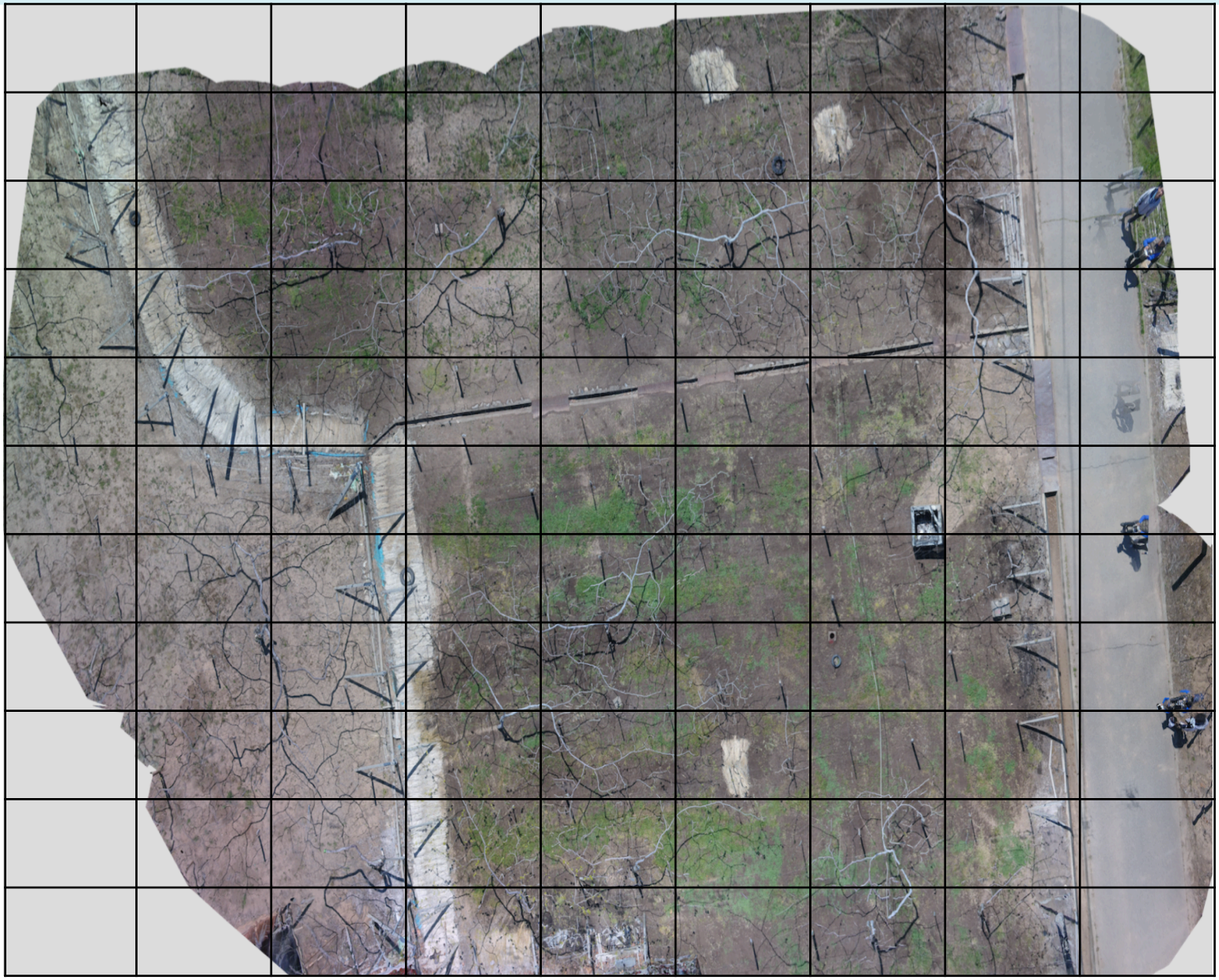


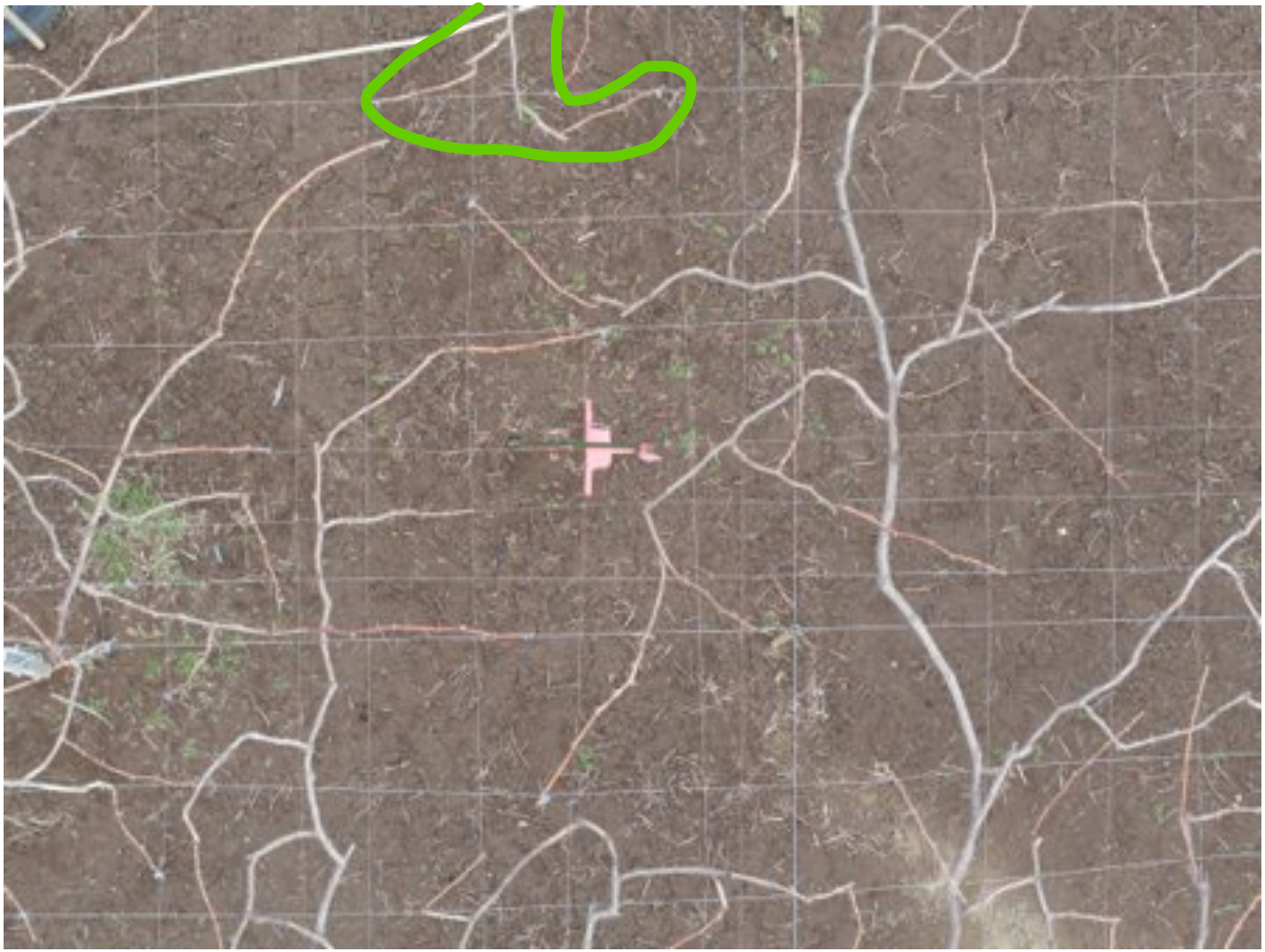
Outline

- Goal
- The problems (issues)
- Idea
- System
- Discussions
- Future work
- Conclusion

Goal

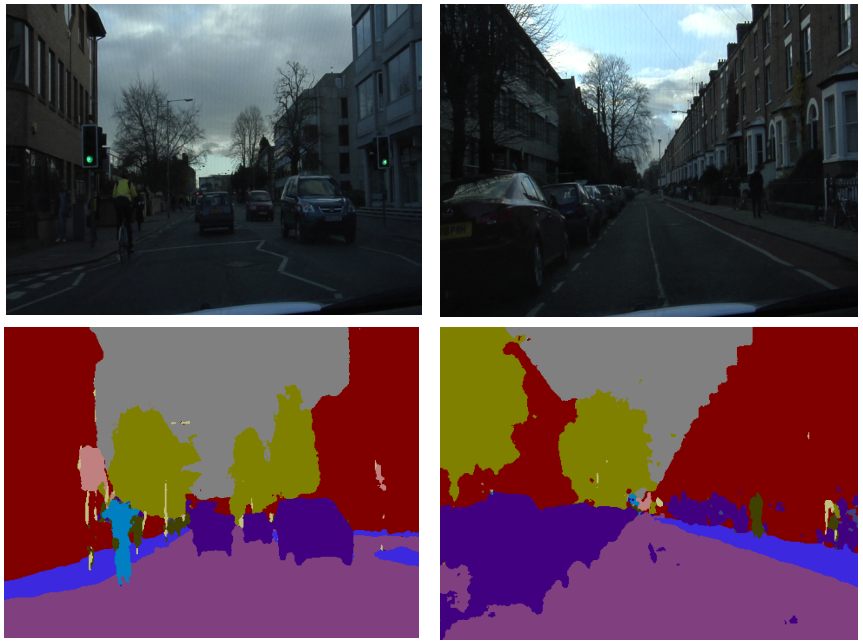


Goal



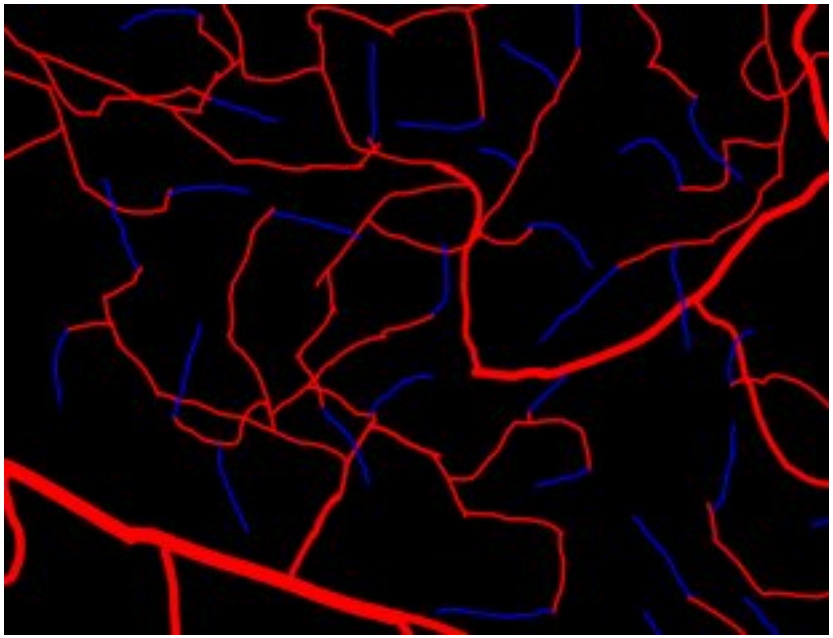
SegNet

- Computer Vision and Robotics Group
- Targets are transportation
- Tutorial
  - 480x360 pixel
  - 367 images
  - 40000 times of learning

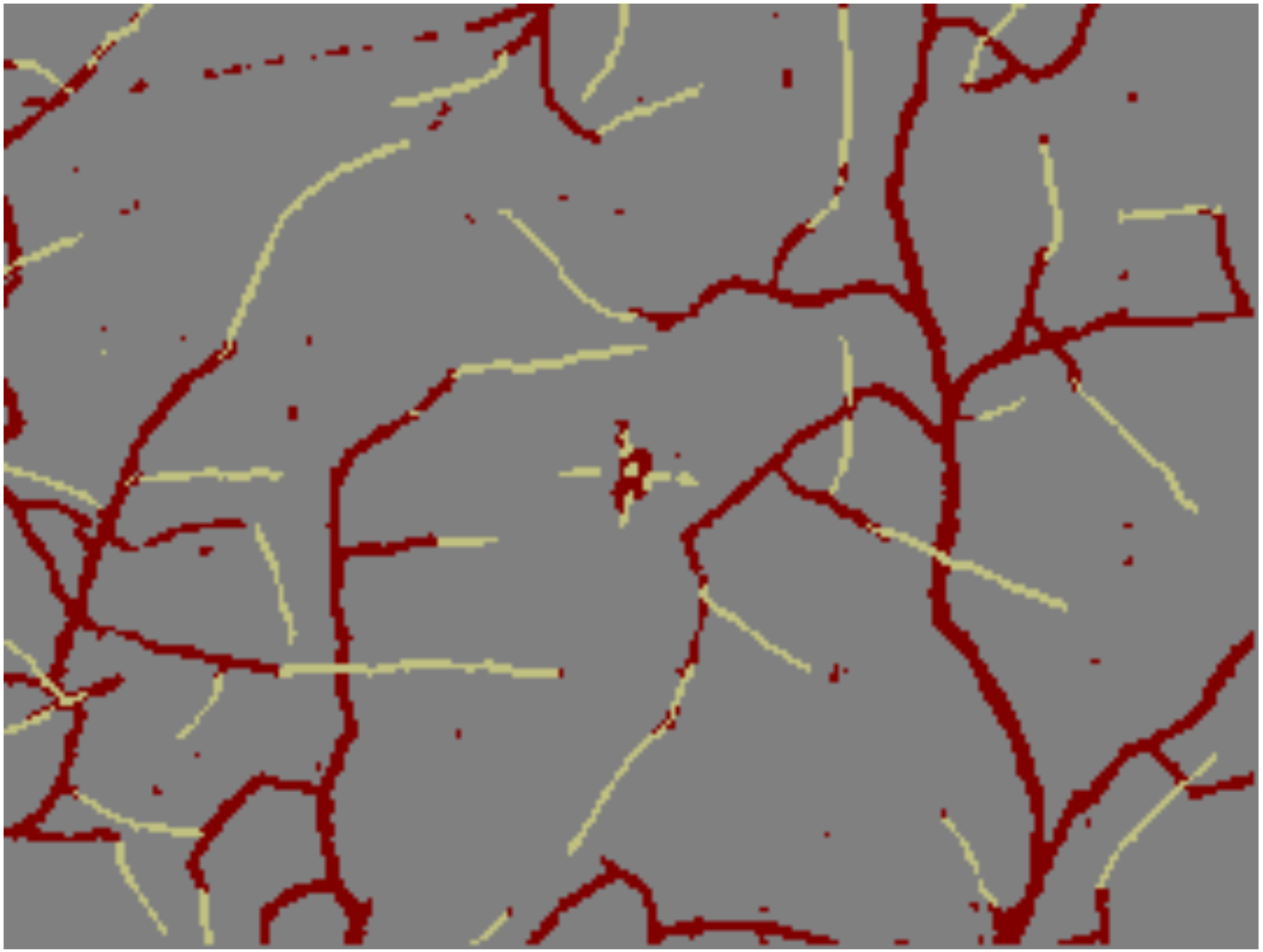


SegNet

- 480x360 pixel
- 1600 images
- 80000 times of learning



Result of SegNet's



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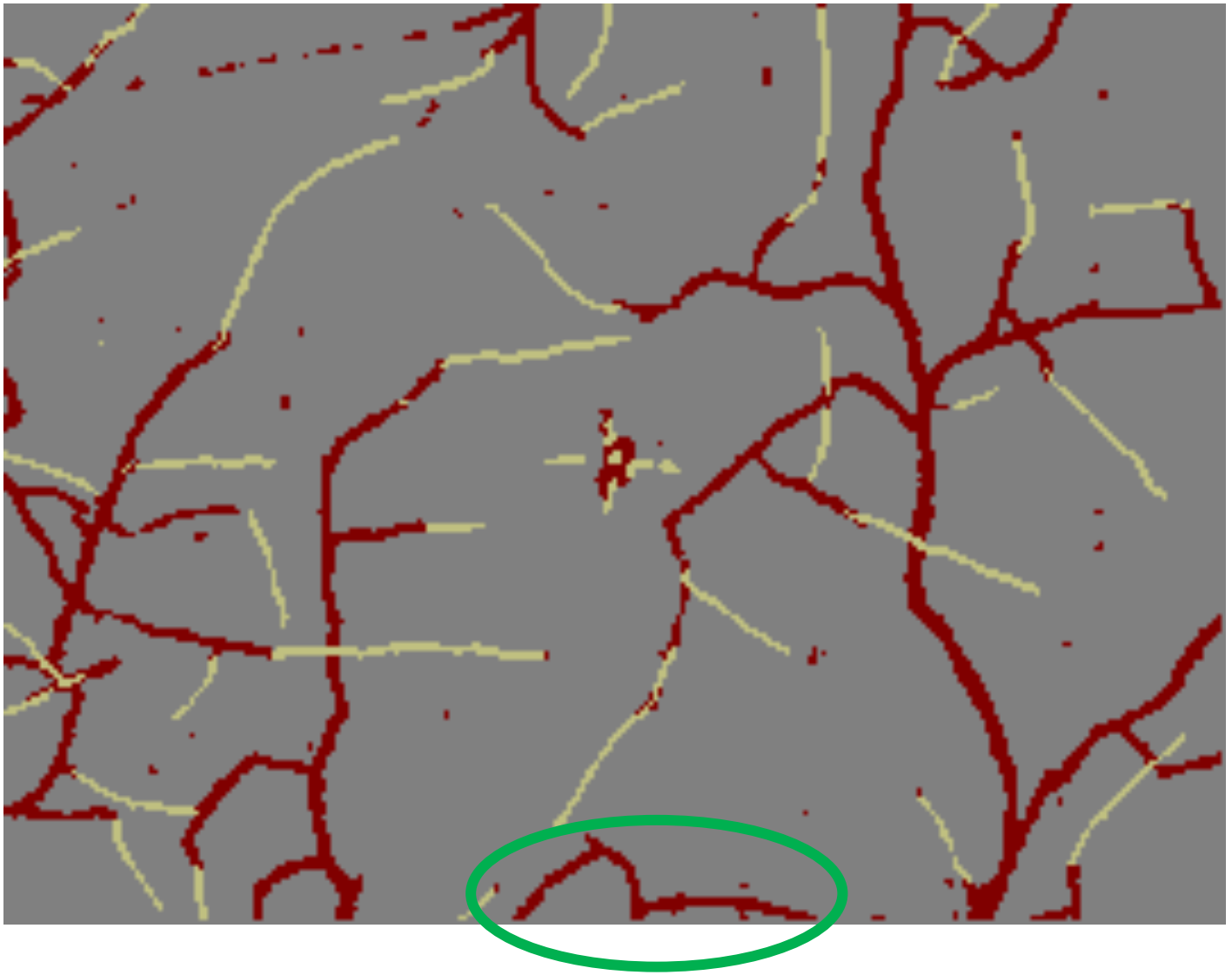

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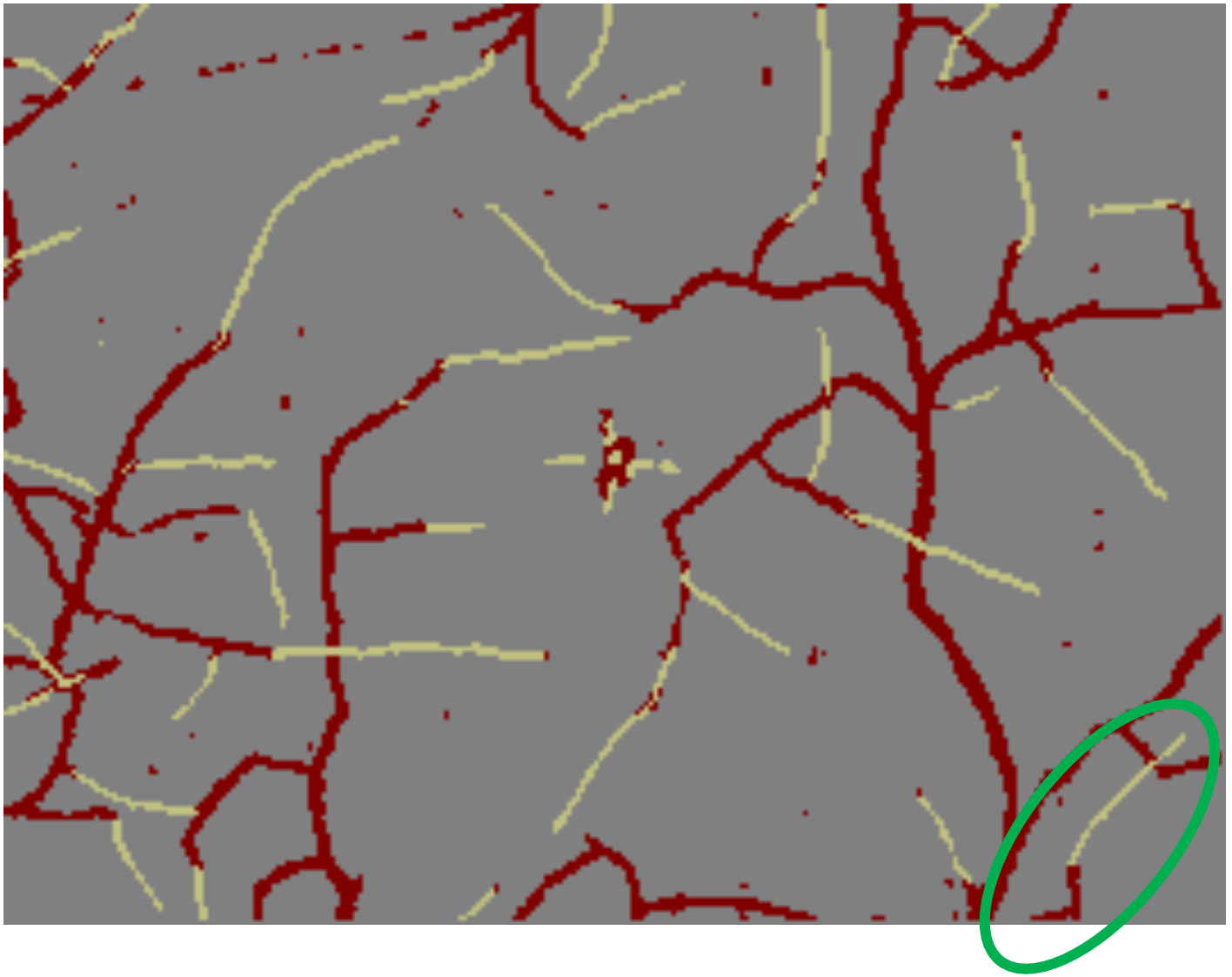

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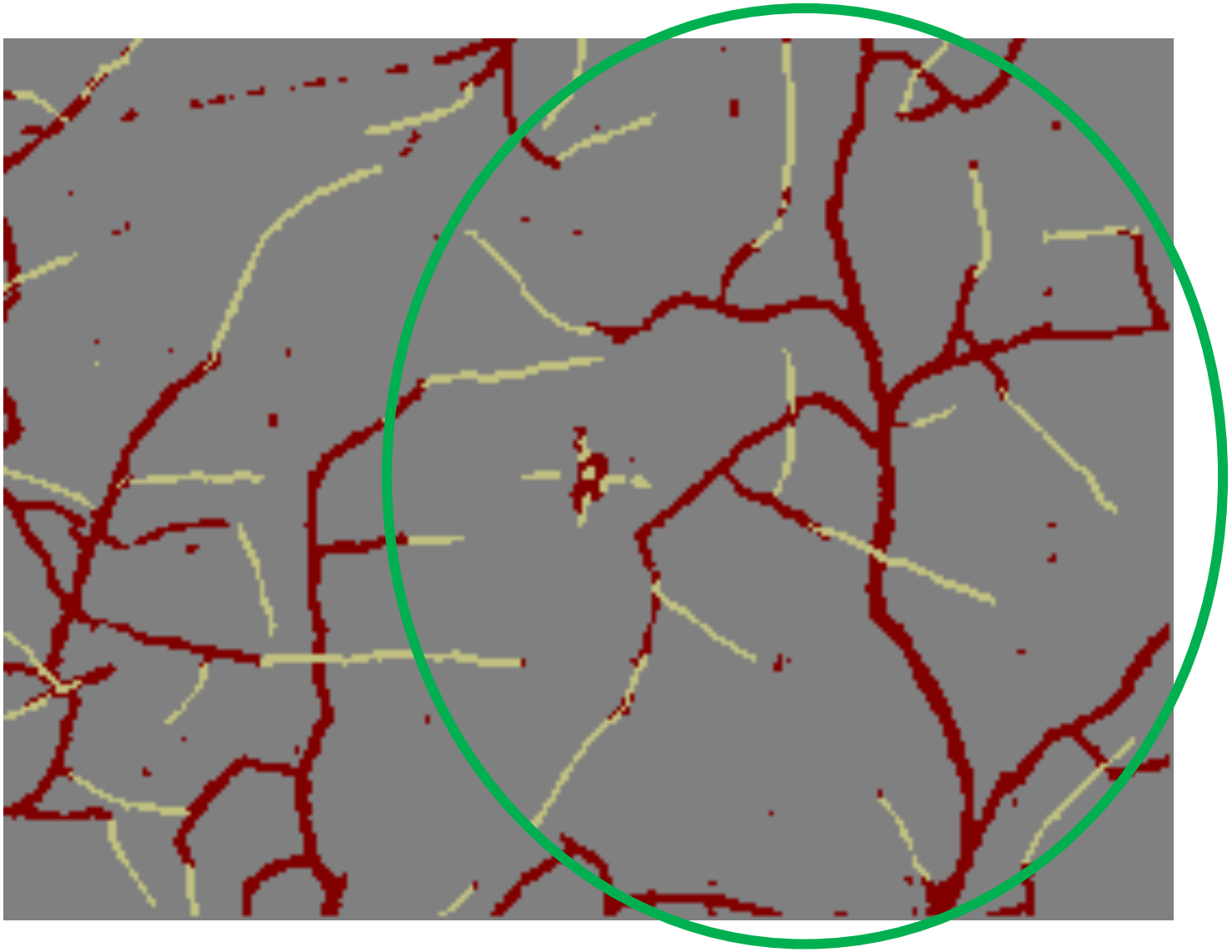

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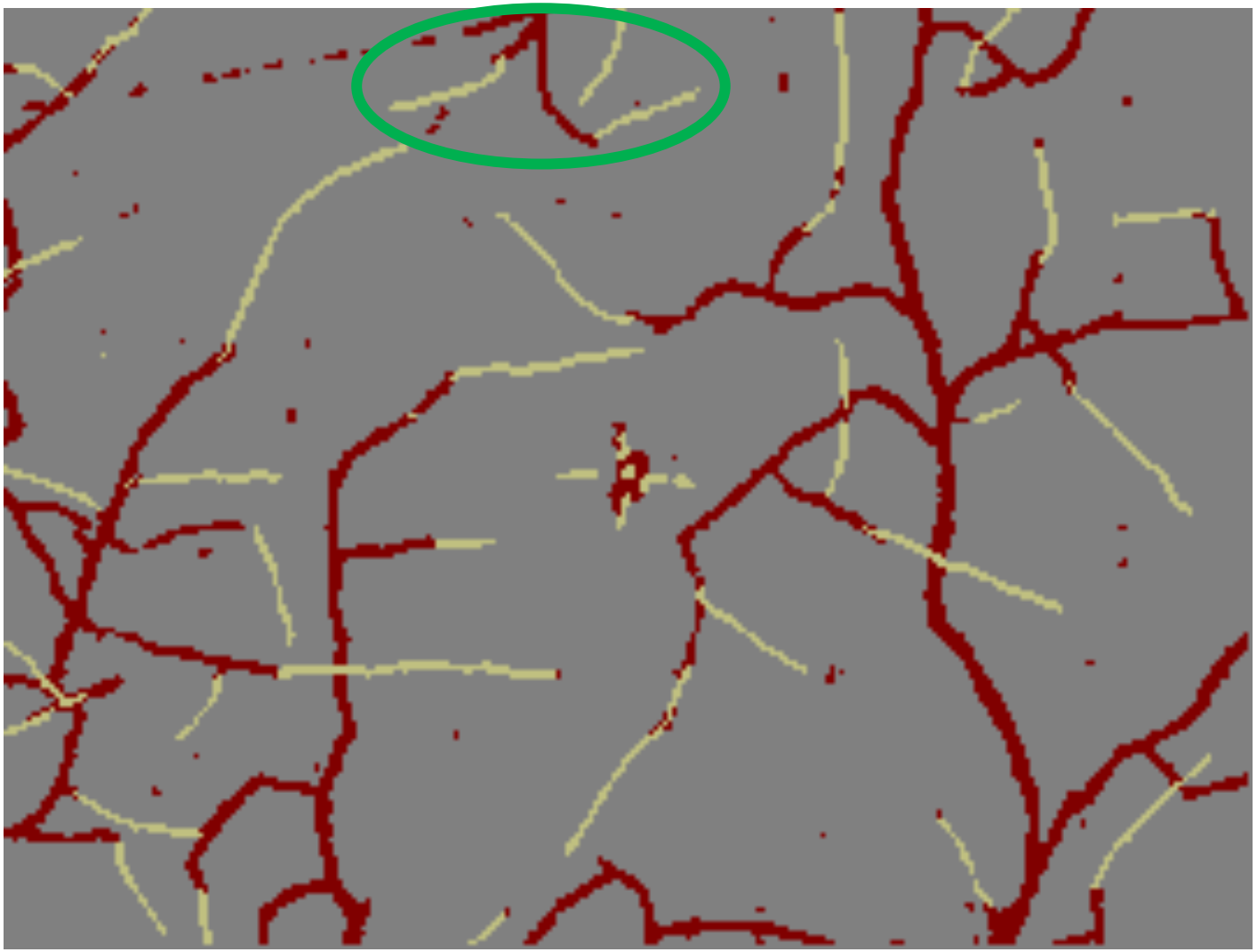

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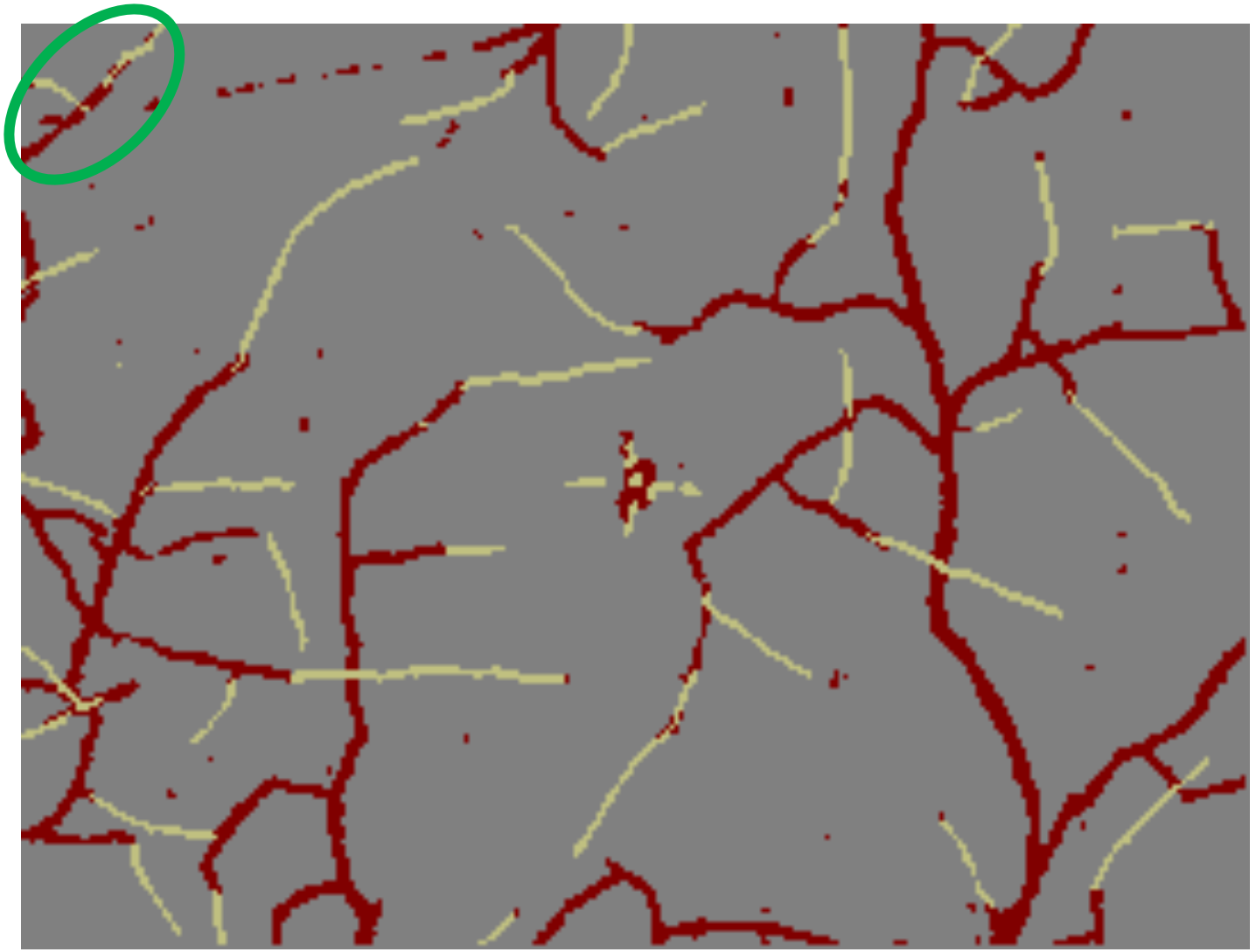

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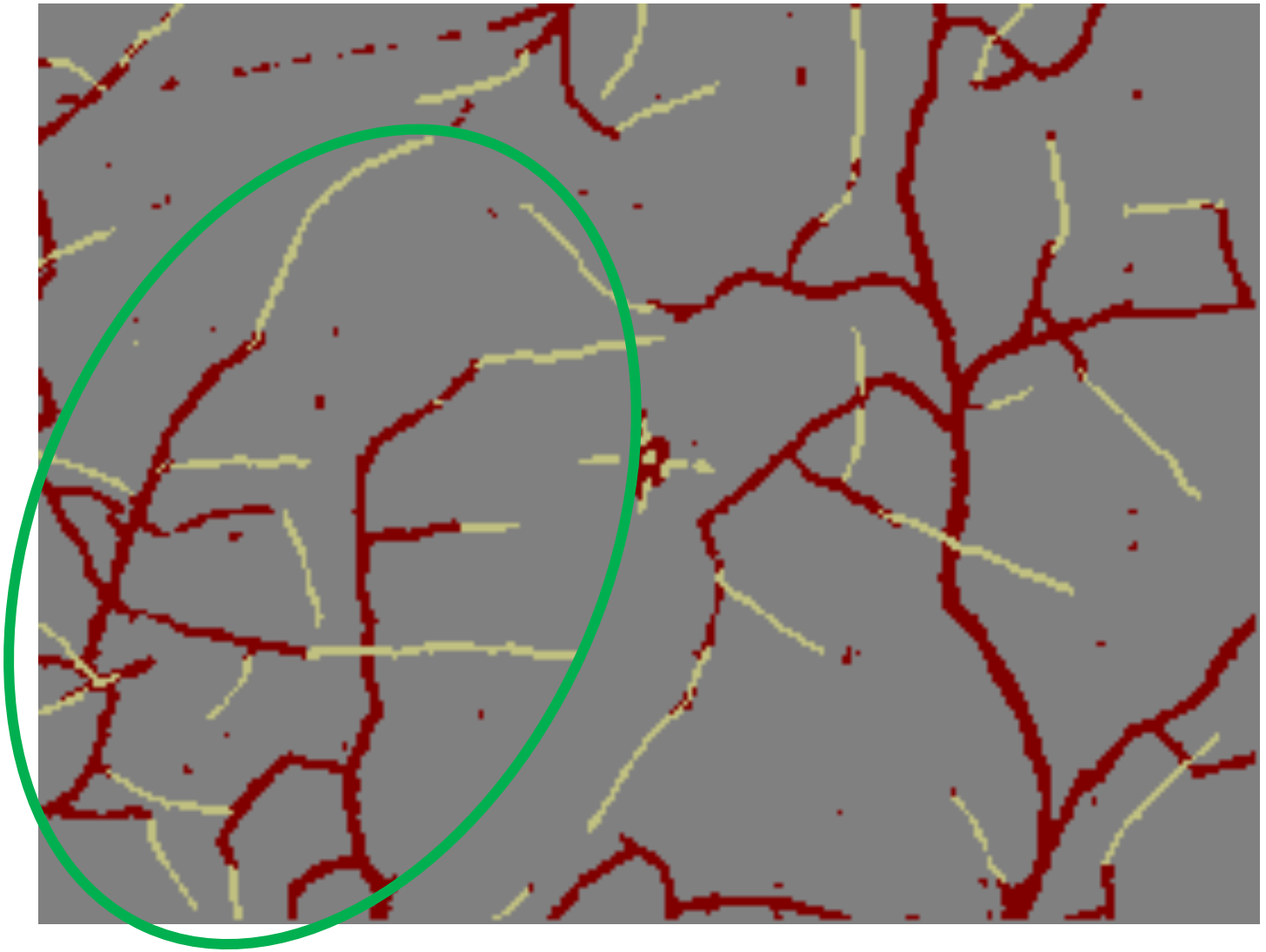

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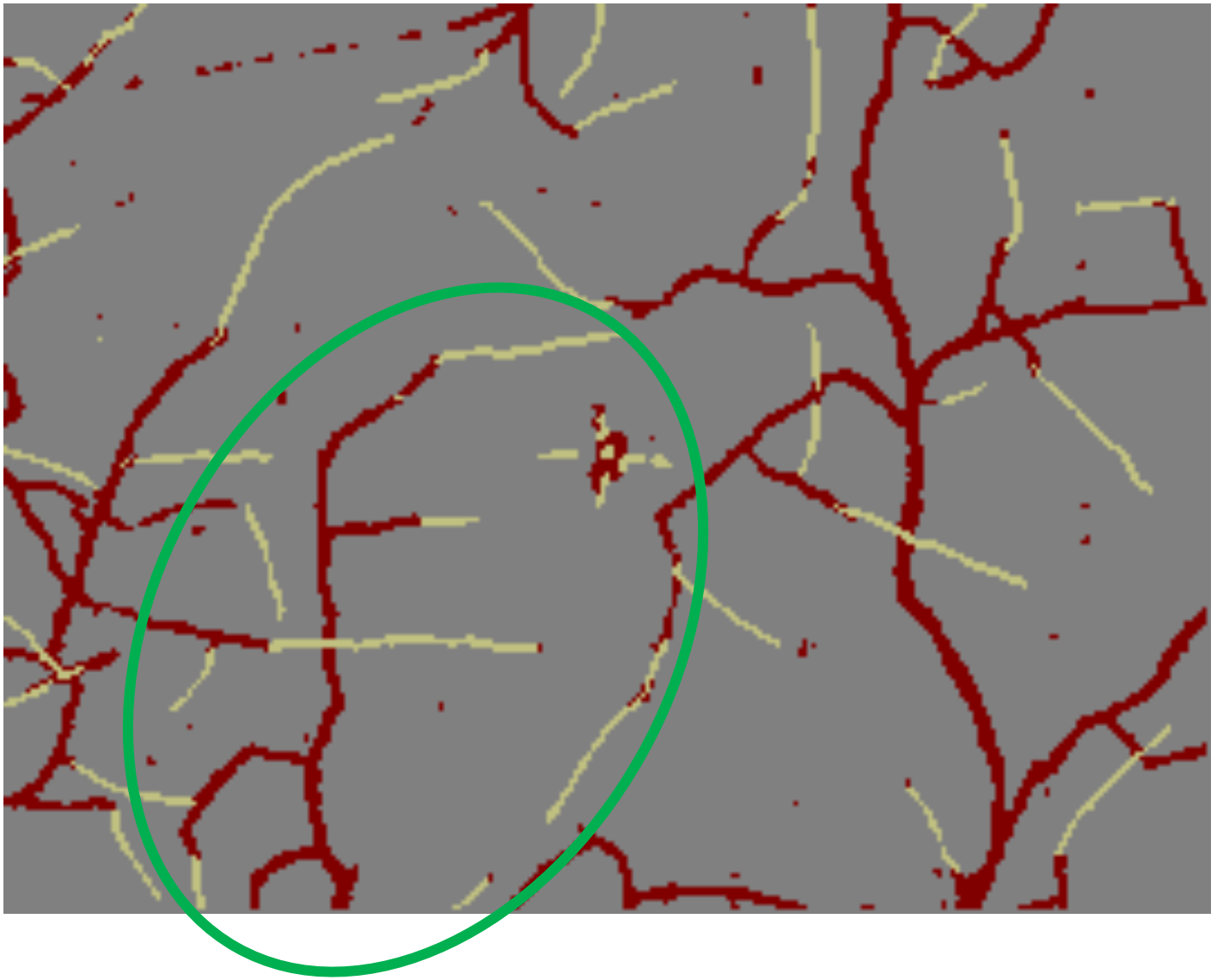

Outline

- **Goal:** to count up all shoots in each branch
- The problems (issues)
- Idea
- System
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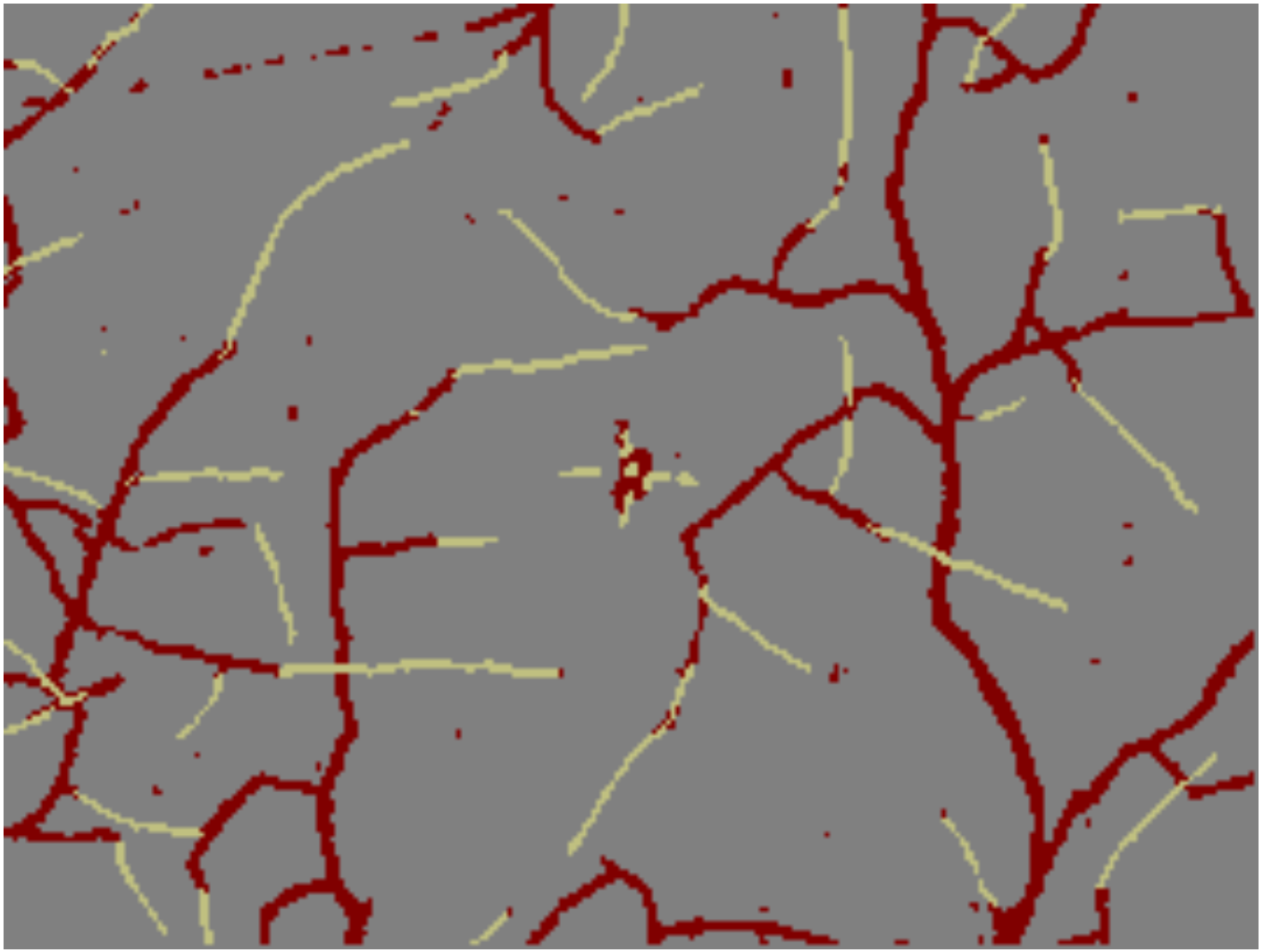
- Conclusion

The problems (issues)



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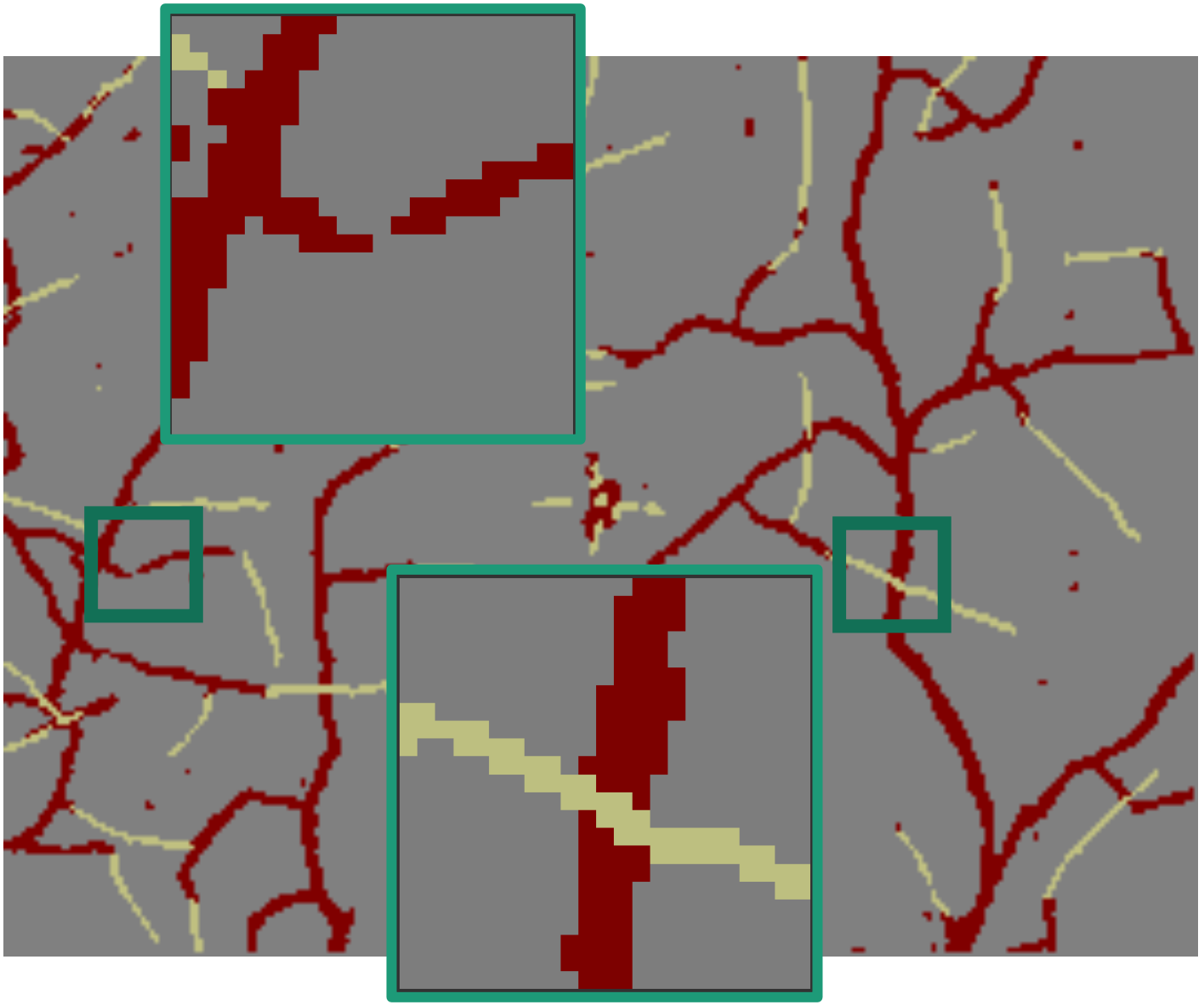

Outline

- **Goal:** to count up all shoots in each branch
- **The problems (issues):** overlap and misrecognition
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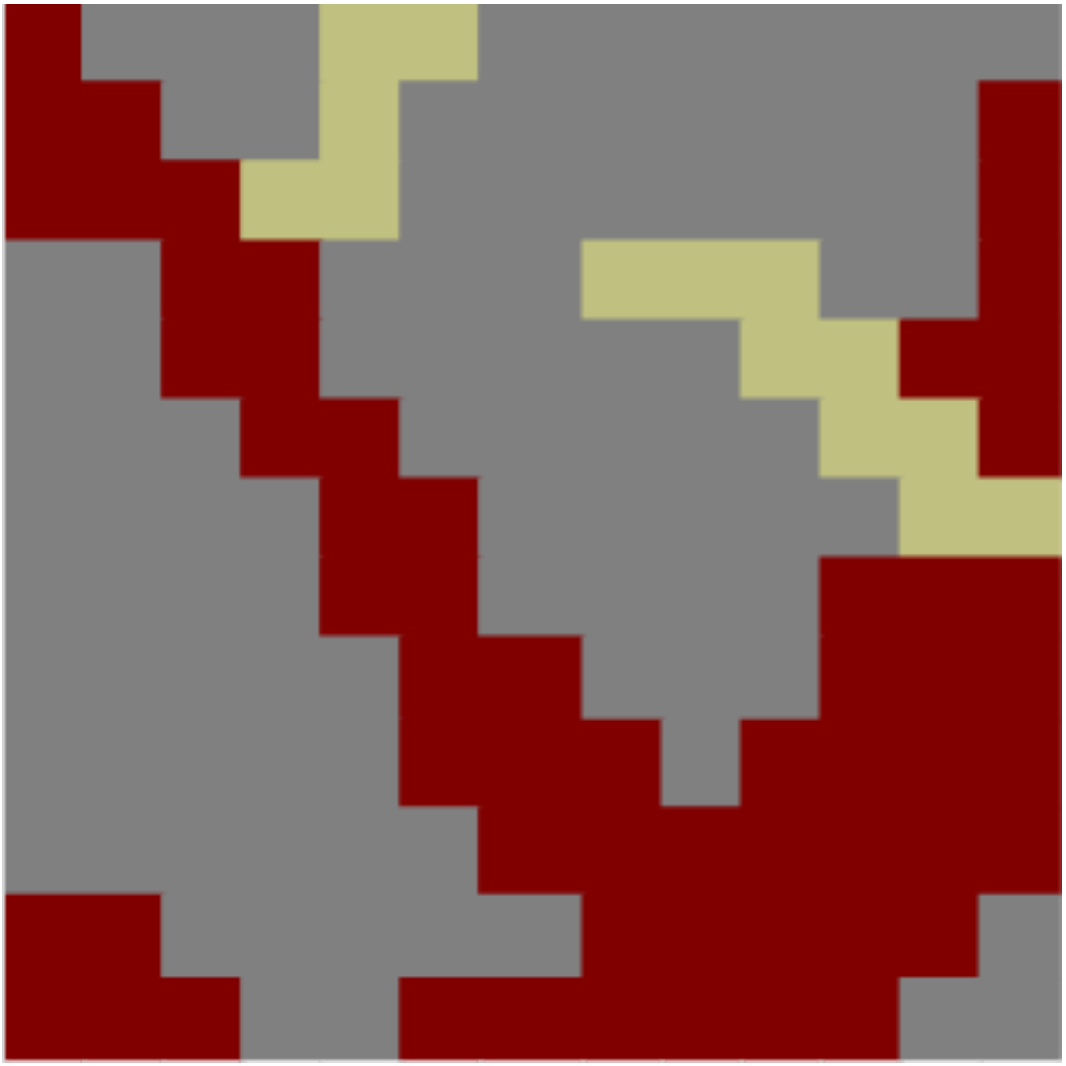
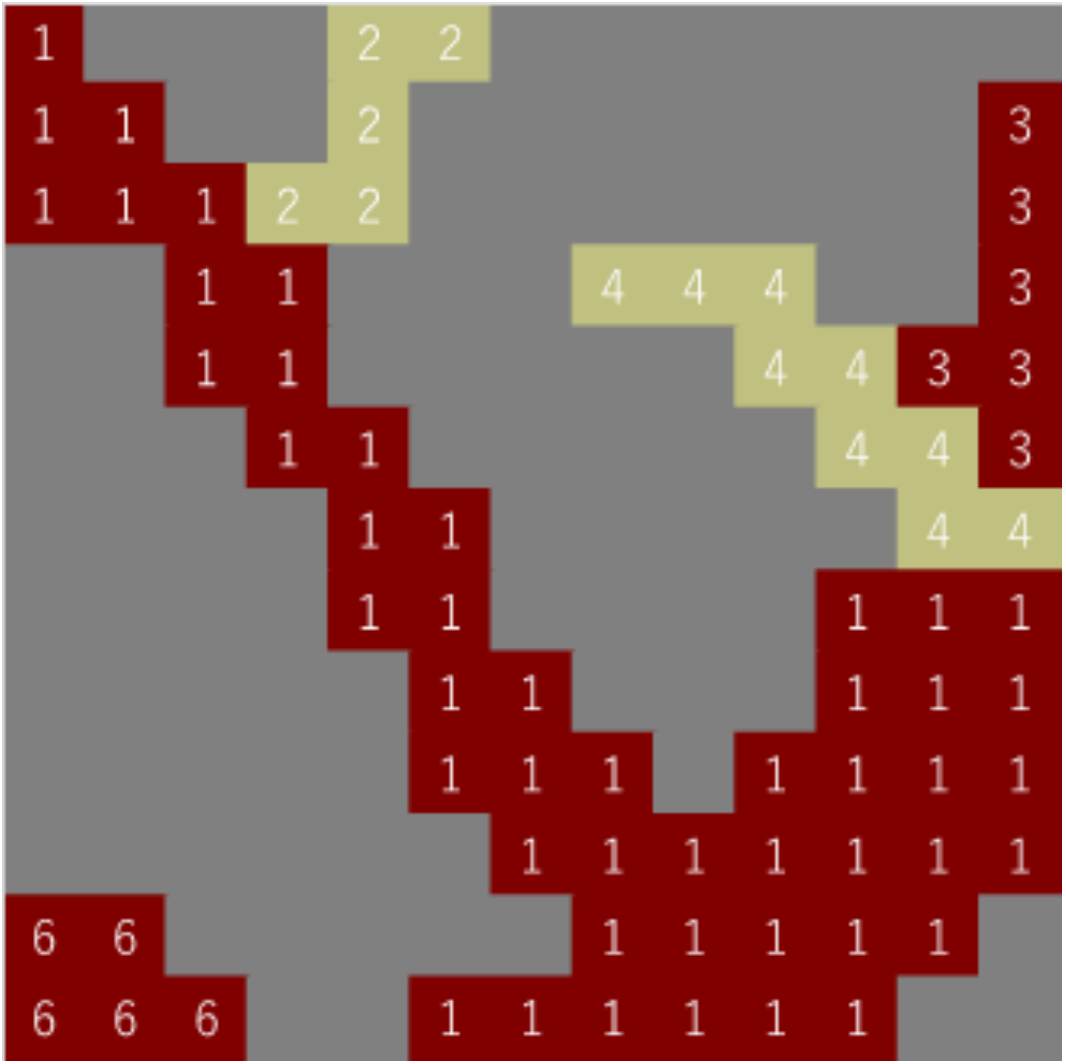
Idea : 3 steps to solve issues.

- **1, Management by ID**
- **2, Remove minor misconceptions**
- **3. Expansion of the area**

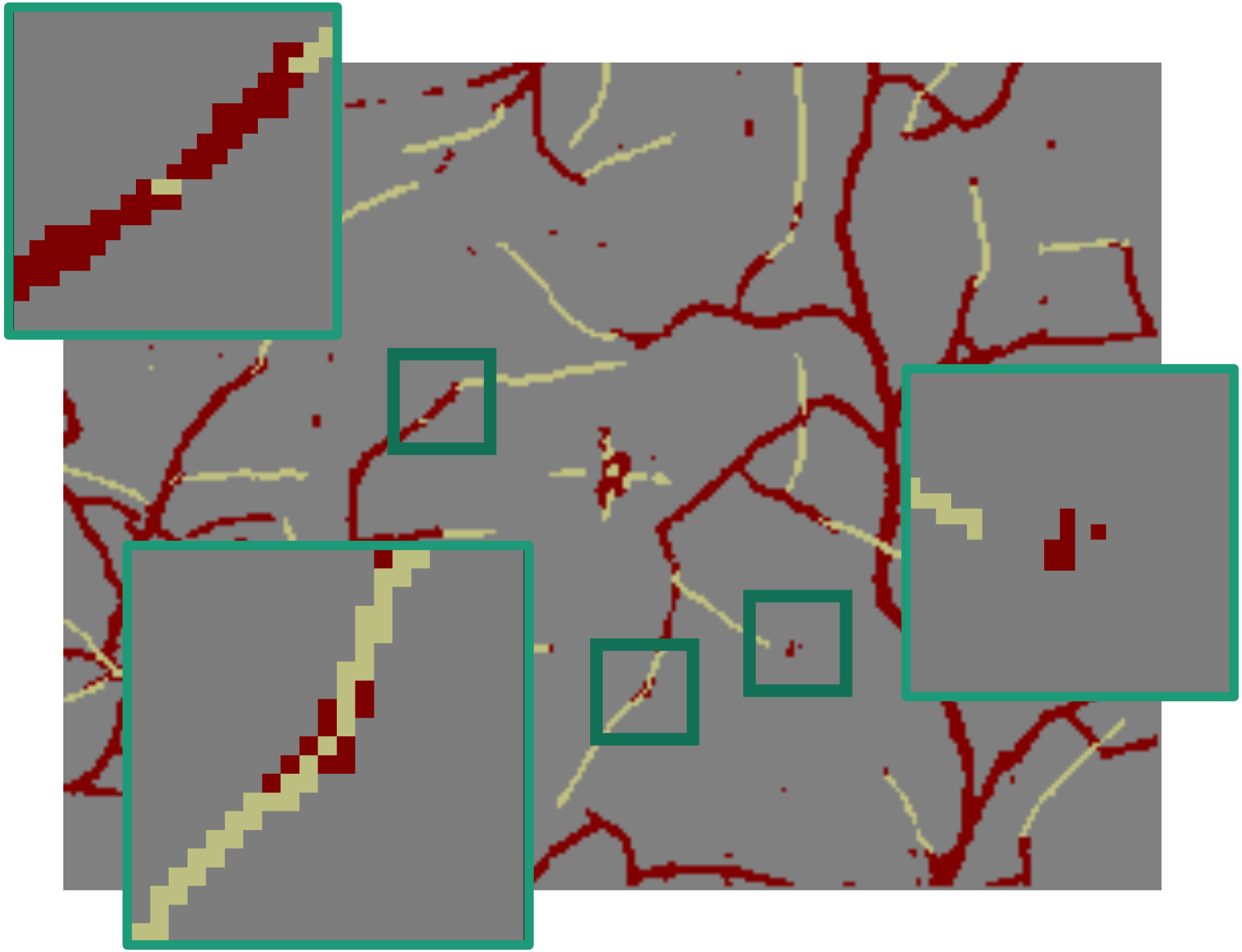
1: Managed by ID



1: Managed by ID



2 : Remove minor misconceptions

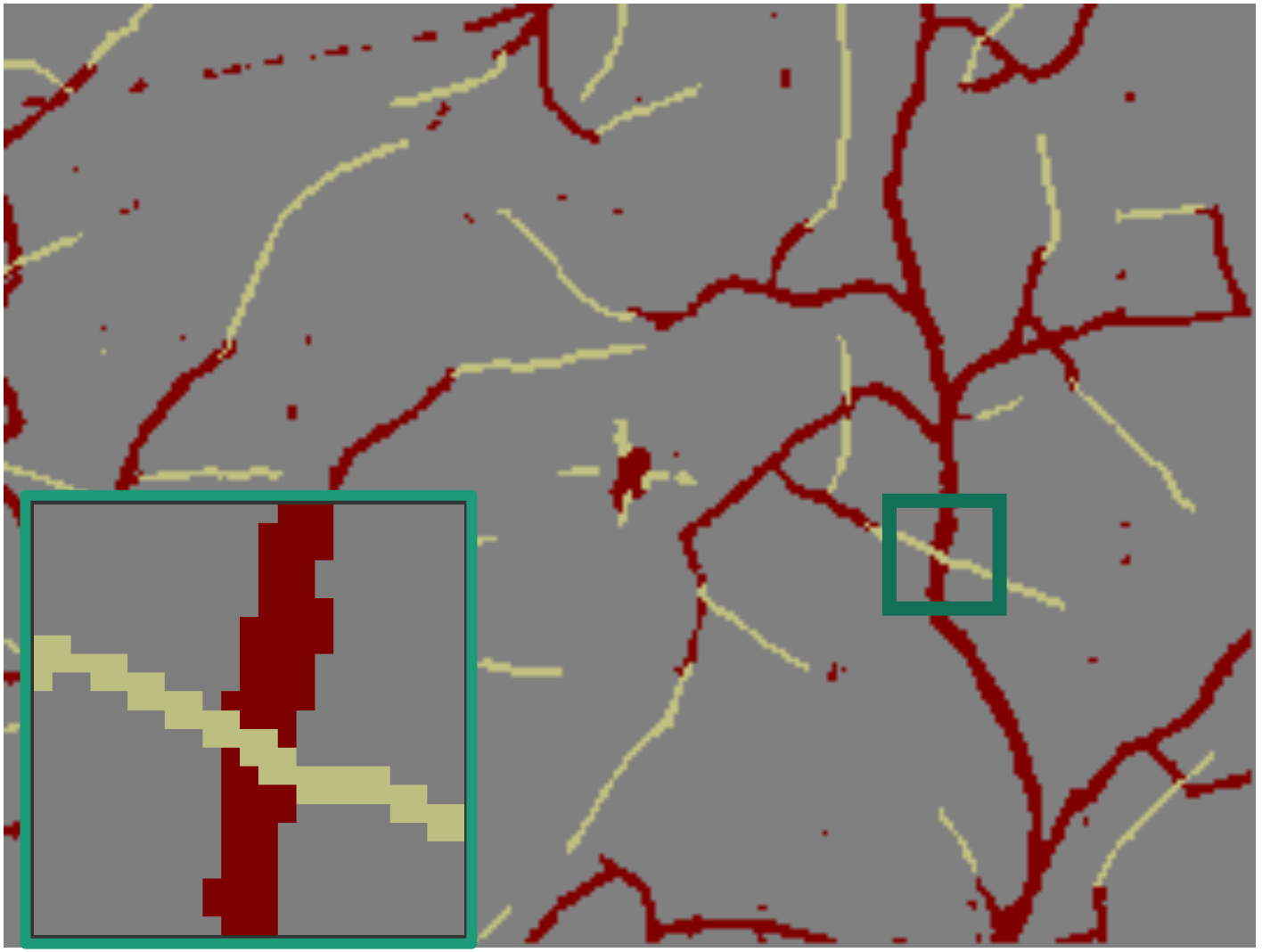


3. Expansion of the area

- Extend the area of branches and shoots
- - Detecting areas of segment leakage
- - Detection of areas dissected by treetops
- - Detection of areas separated by branches

- Size to be enlarged is the thickness of the branch

3. Expansion of the area



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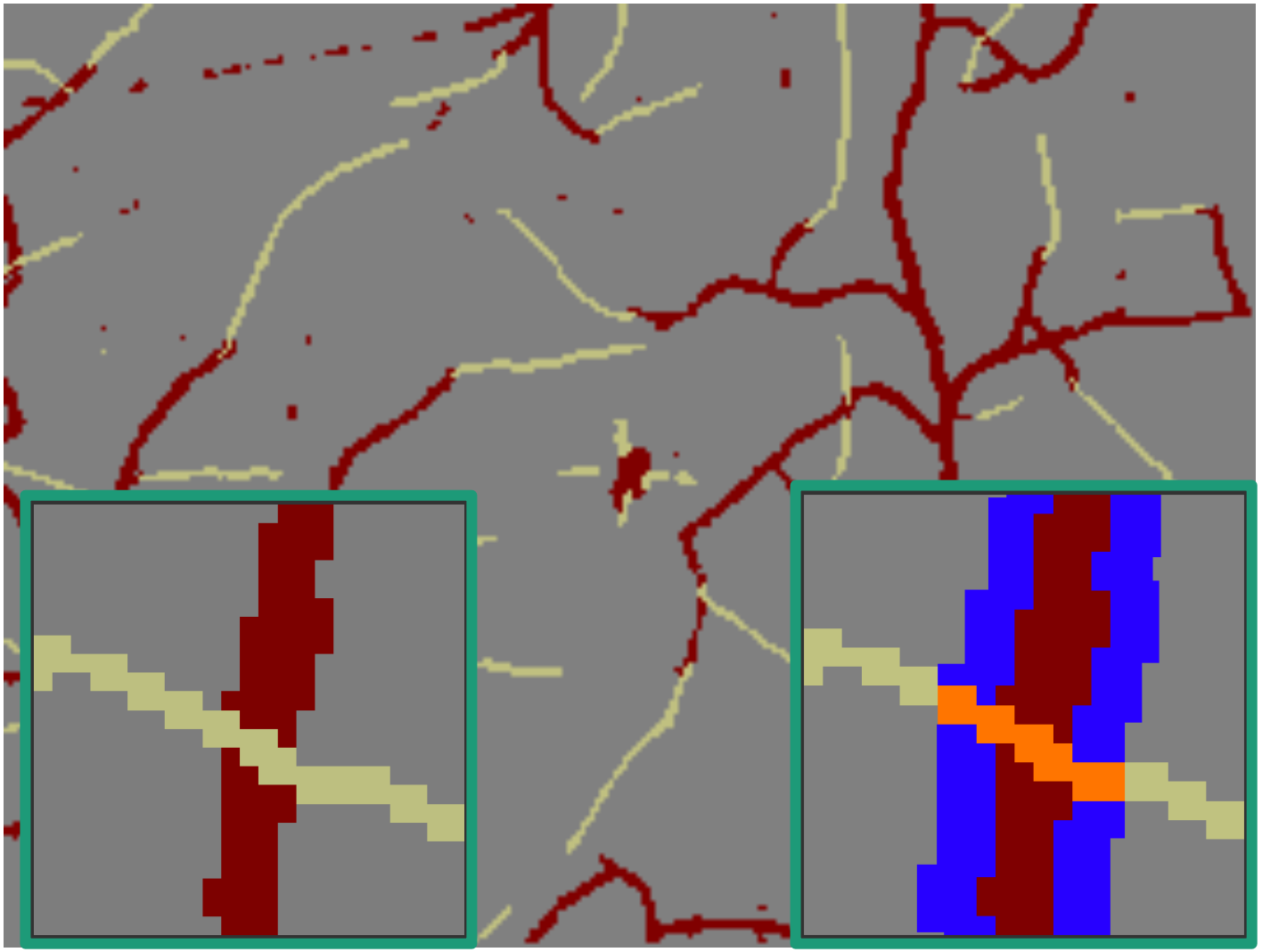

Outline

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- **The problems (issues):** overlap and misrecognition
- Idea: 3 steps
- System
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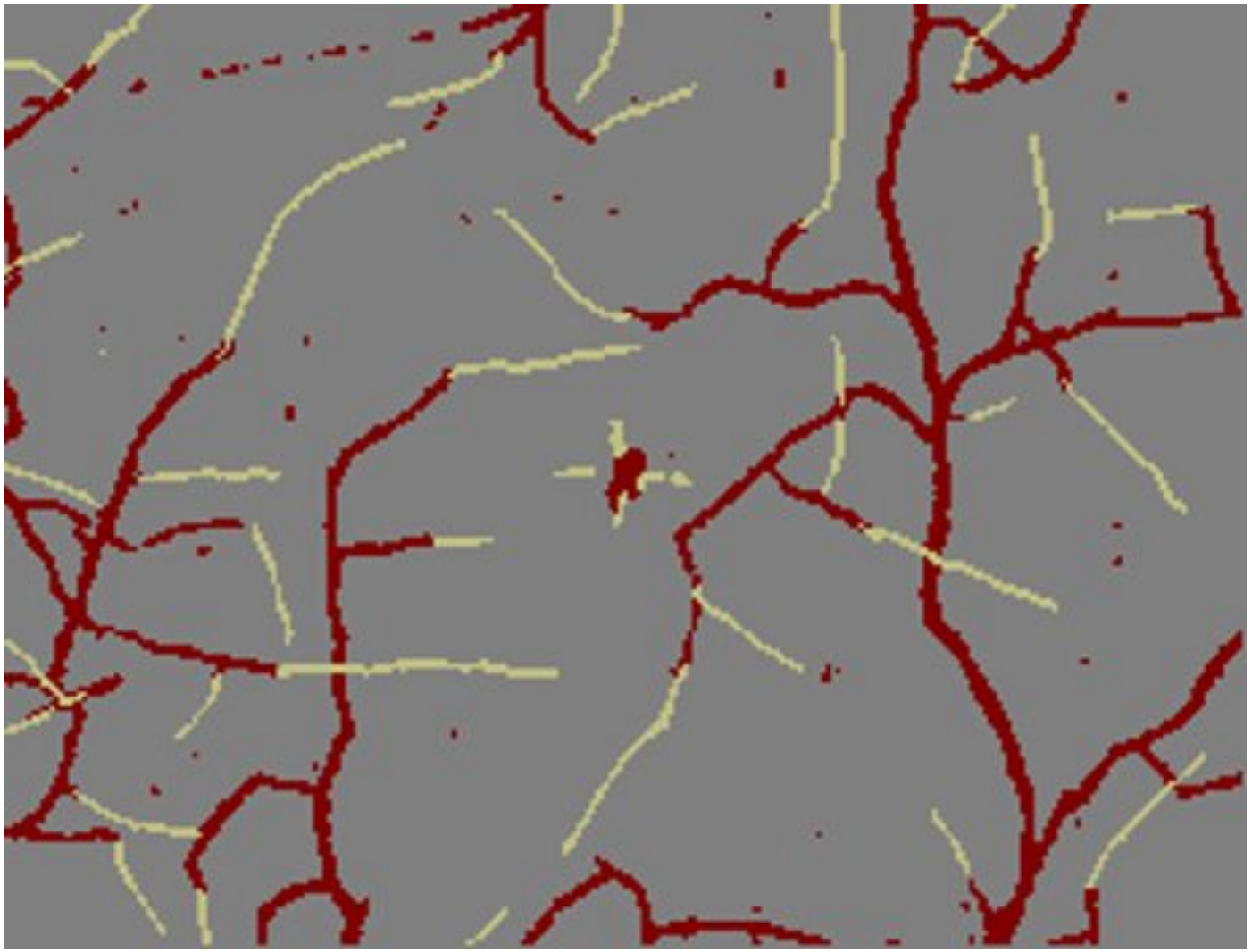
System



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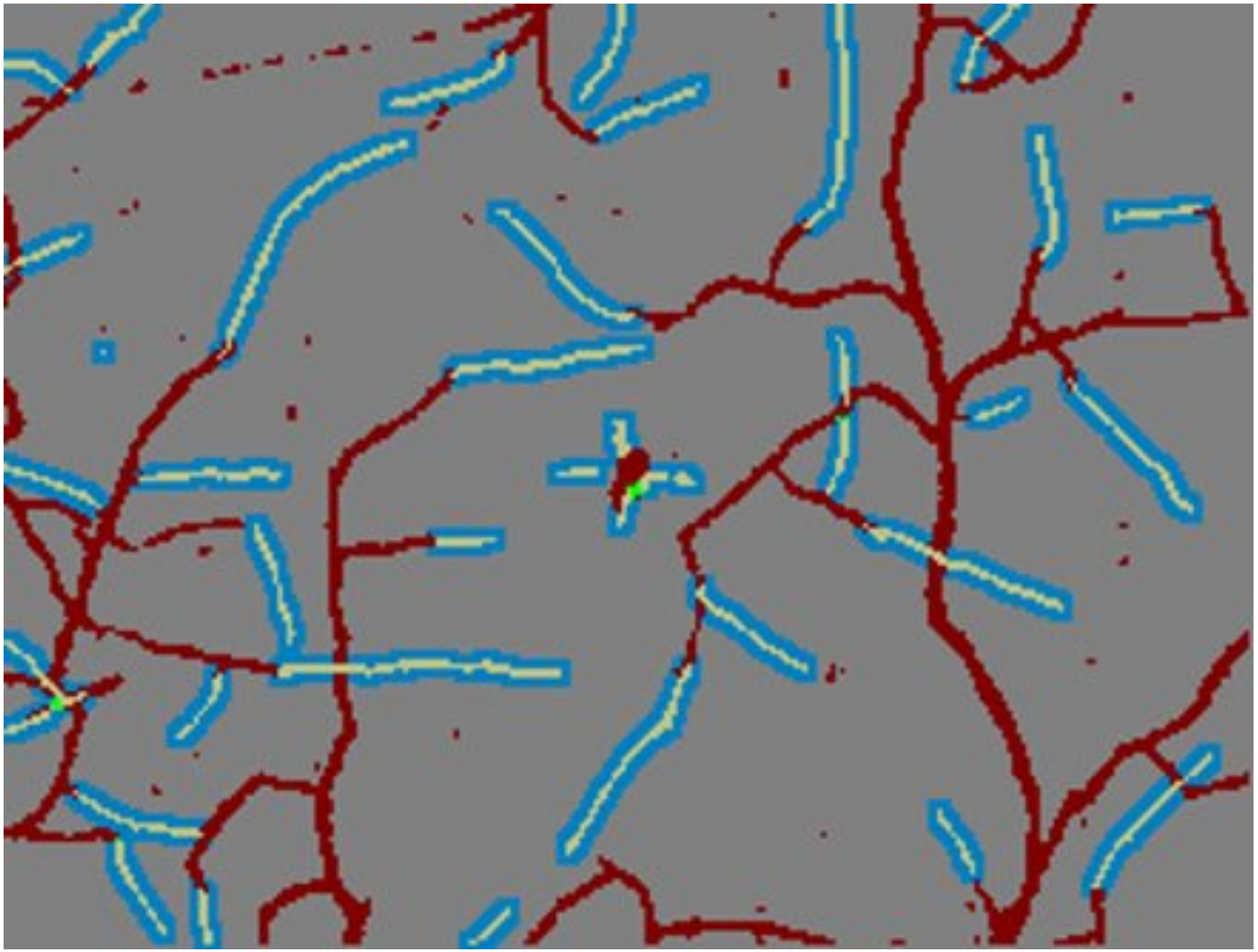

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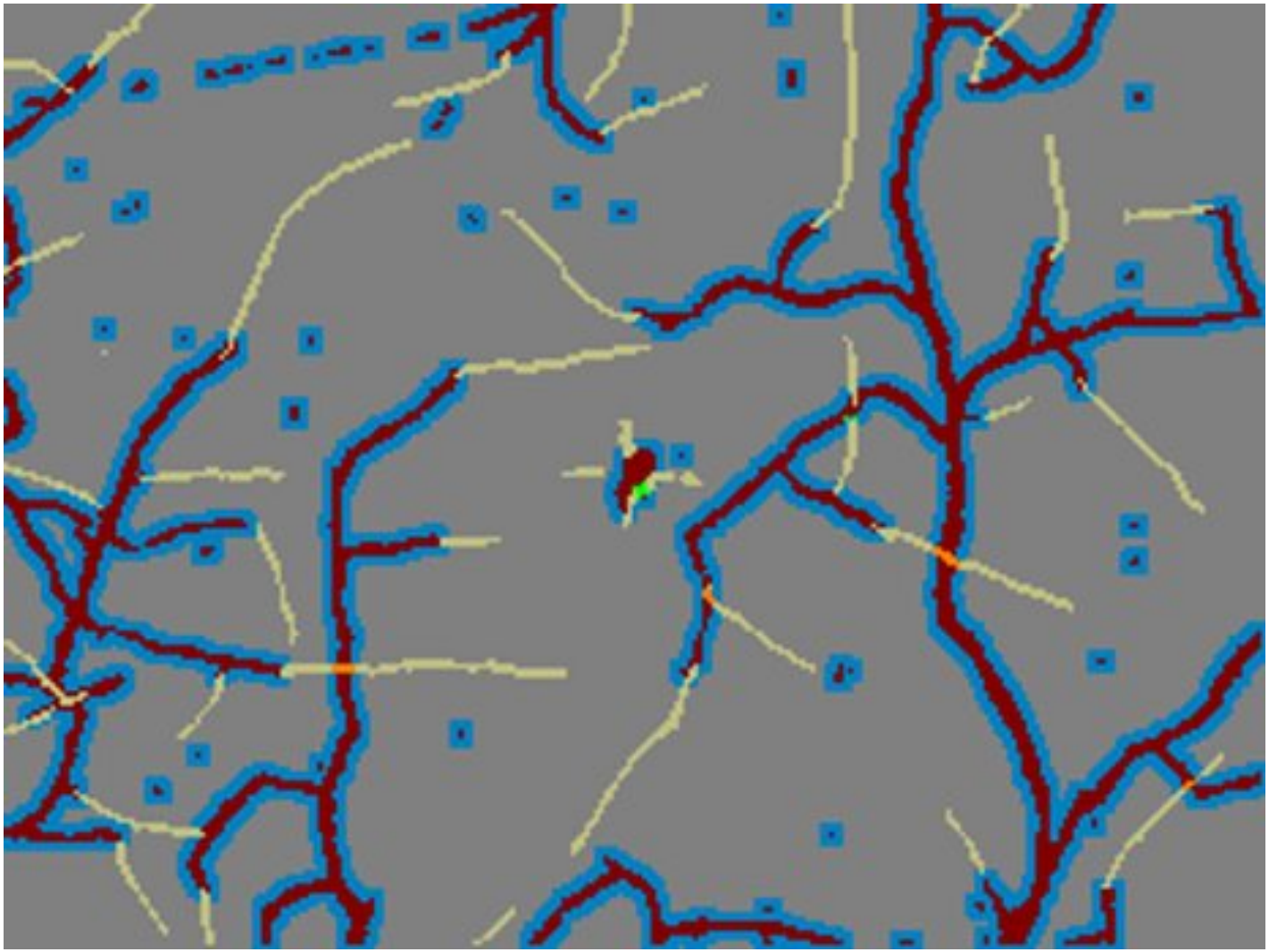

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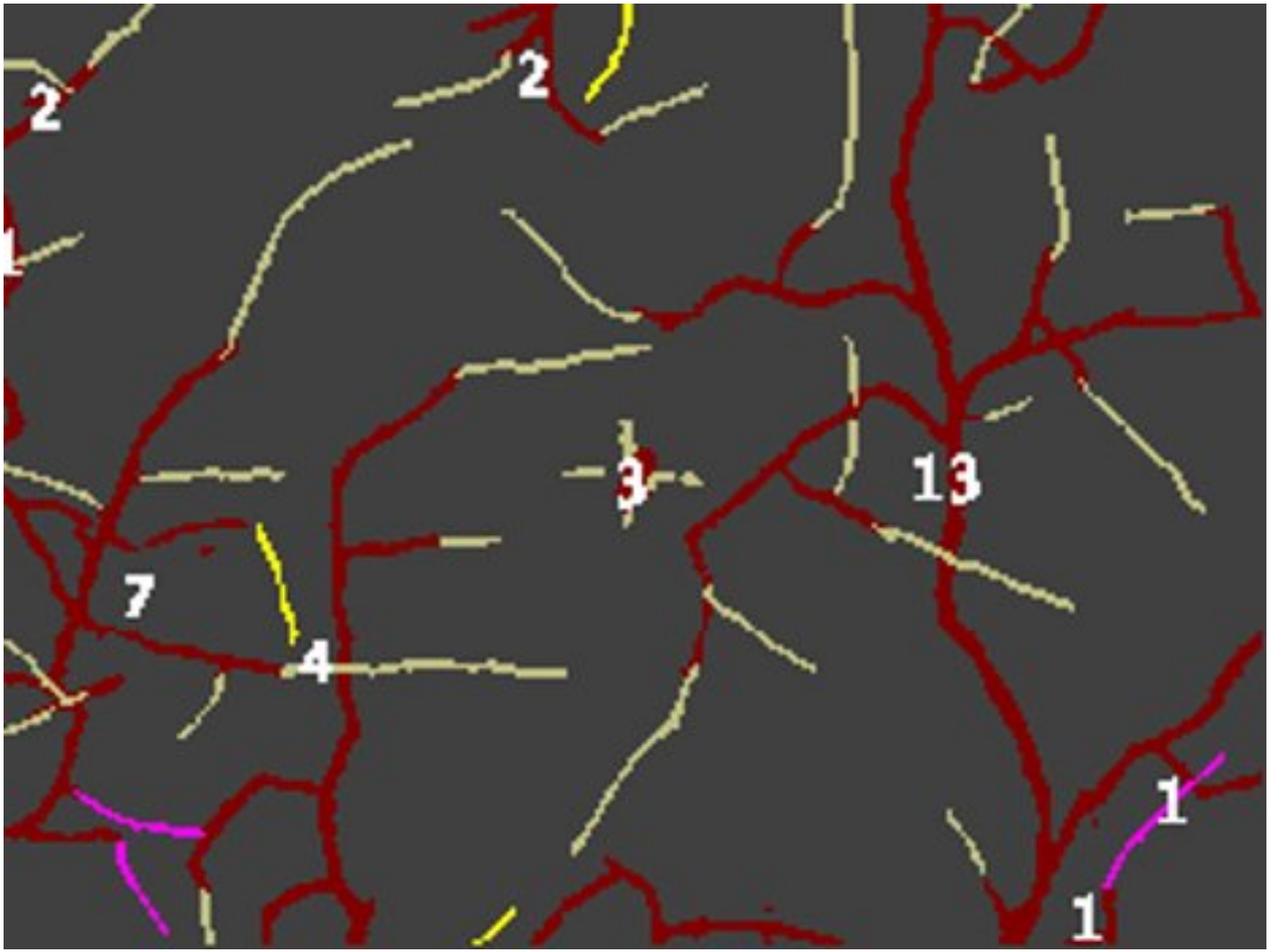
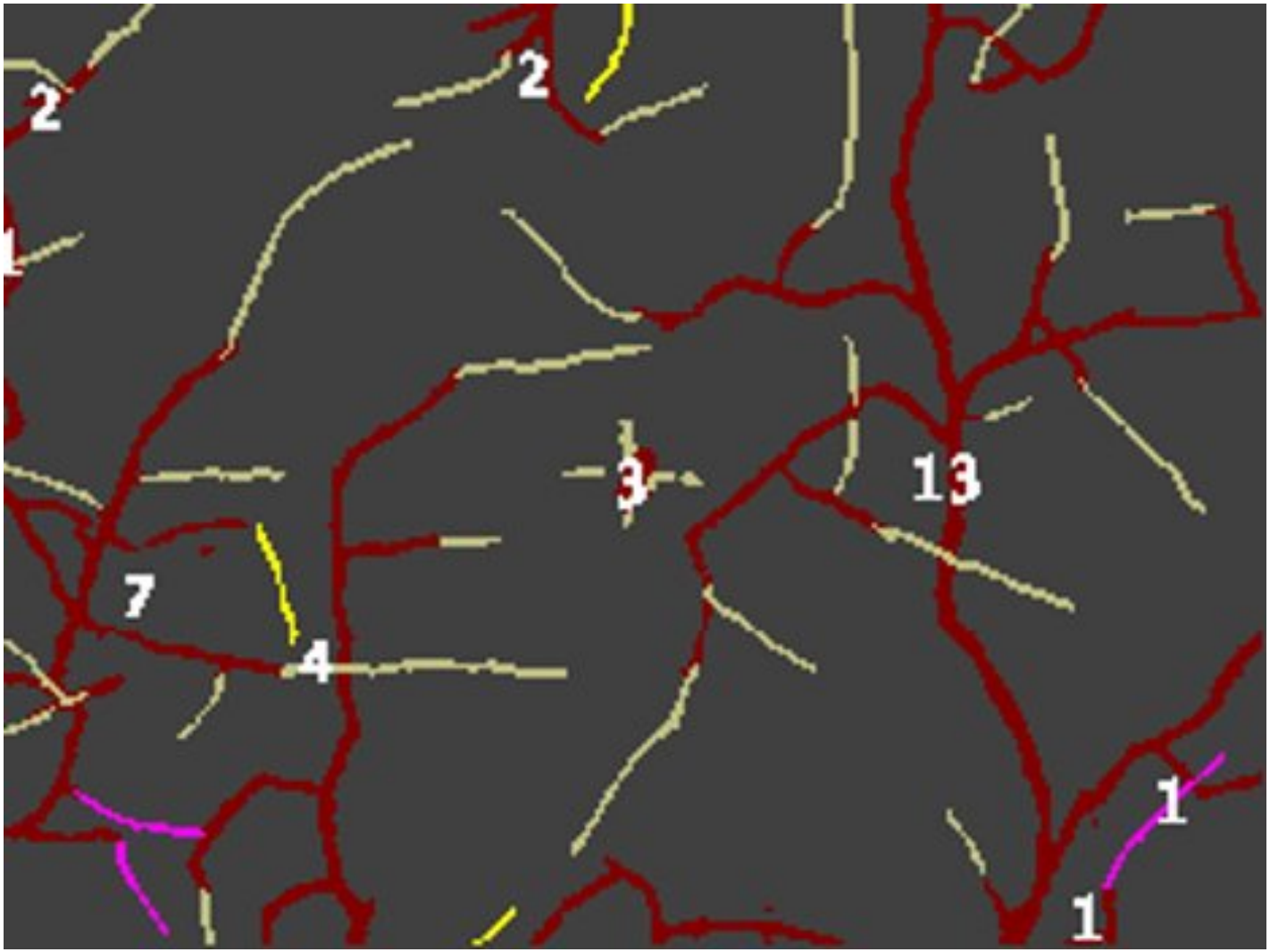


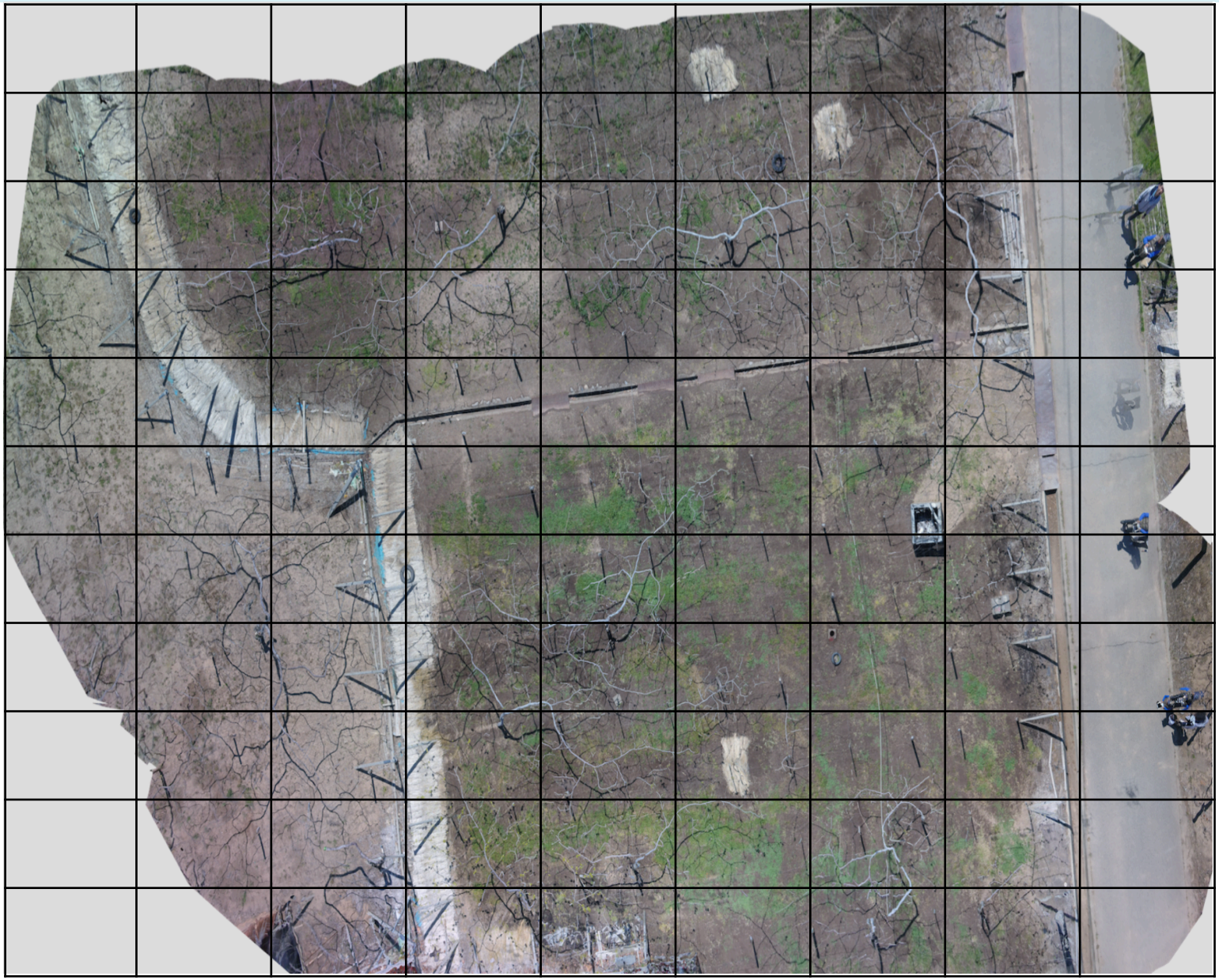
Outline

- **Goal:** to count up all shoots in each branch
- **The problems (issues):** overlap and misrecognition
- Idea: 3 steps
- System: success
- Discussions:
- Future work
- Conclusion

Discussions



Future work



Conclusion

- **Goal:** to count up all shoots in each branch
- **The problems (issues):** overlap and misrecognition
- Idea: 3 steps
- System: success
- Discussions: discover new challenges
- Future work: connect 100 images