

# Robust SuperPoll Protocol for IEEE 802.11 Wireless LANs

By

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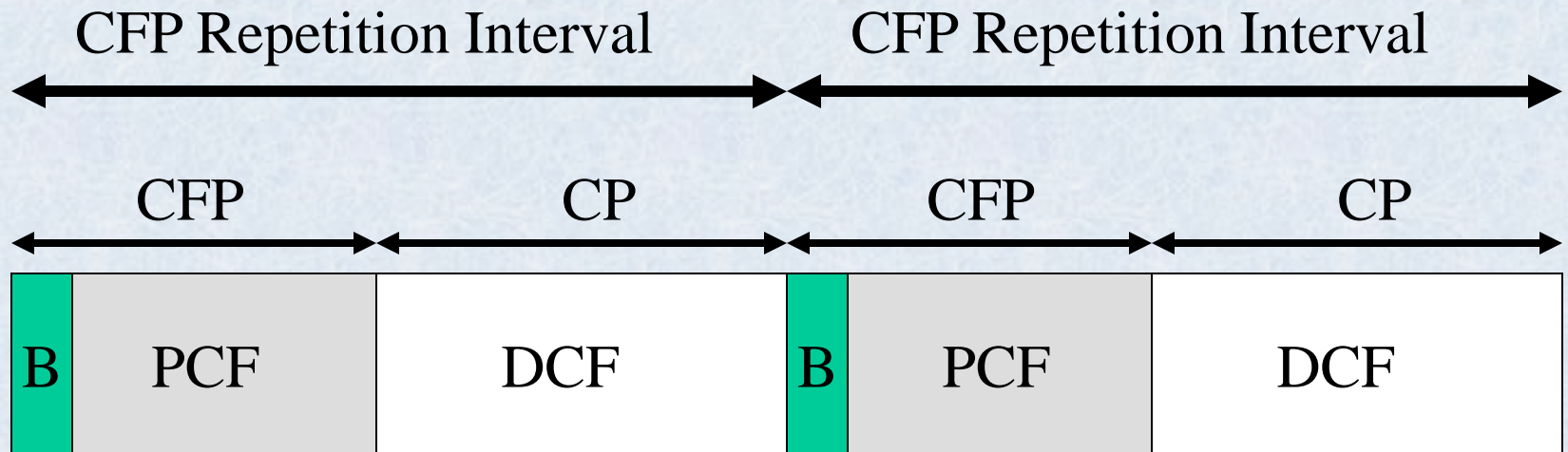
\*\* AIM Engineering Inc.

# Presentation Outline

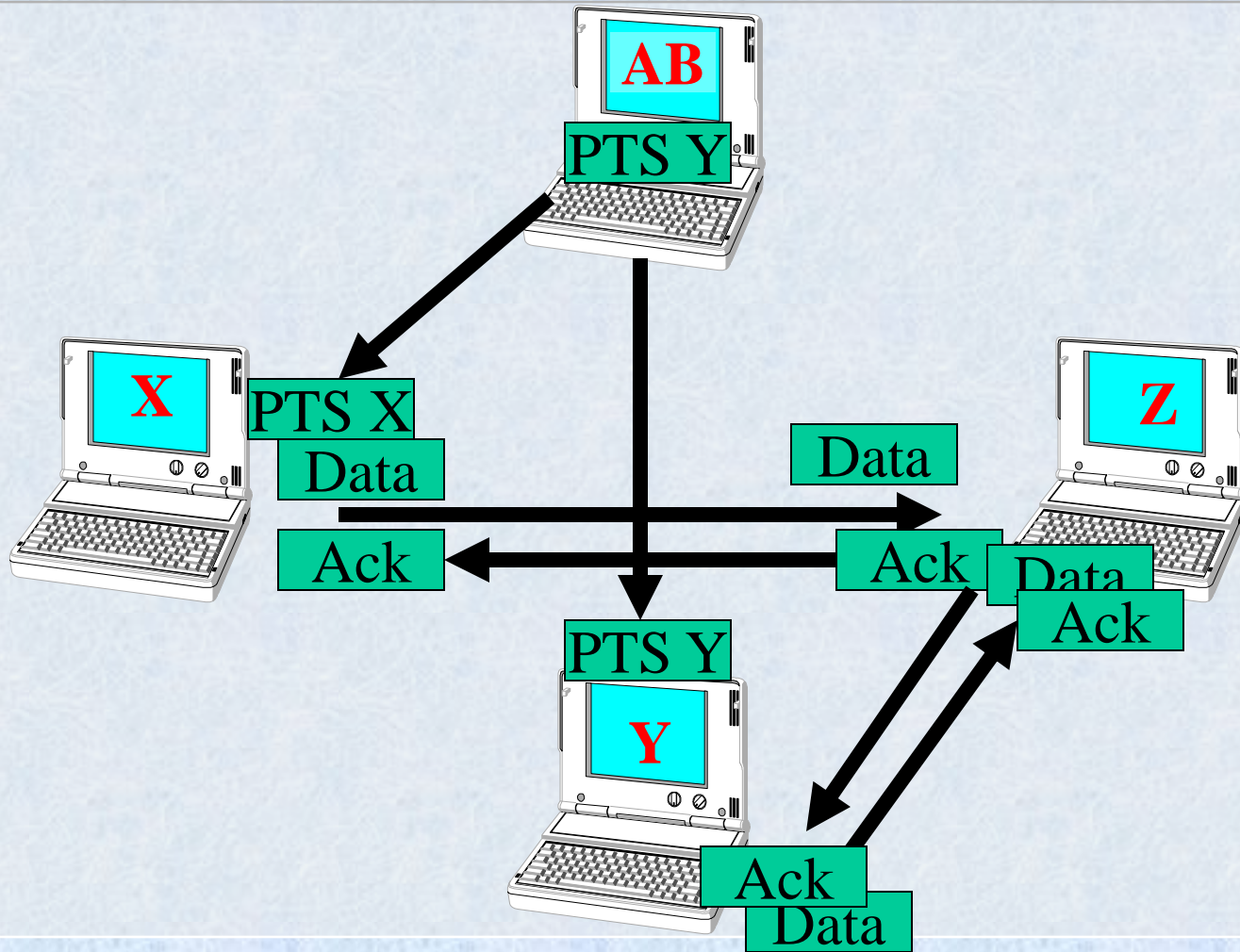
- IEEE 802.11 PCF
- Single Polling Concept in Noisy Environments
- Proposed SuperPoll with Chaining Approach
- Performance Results
- Summary

# IEEE 802.11

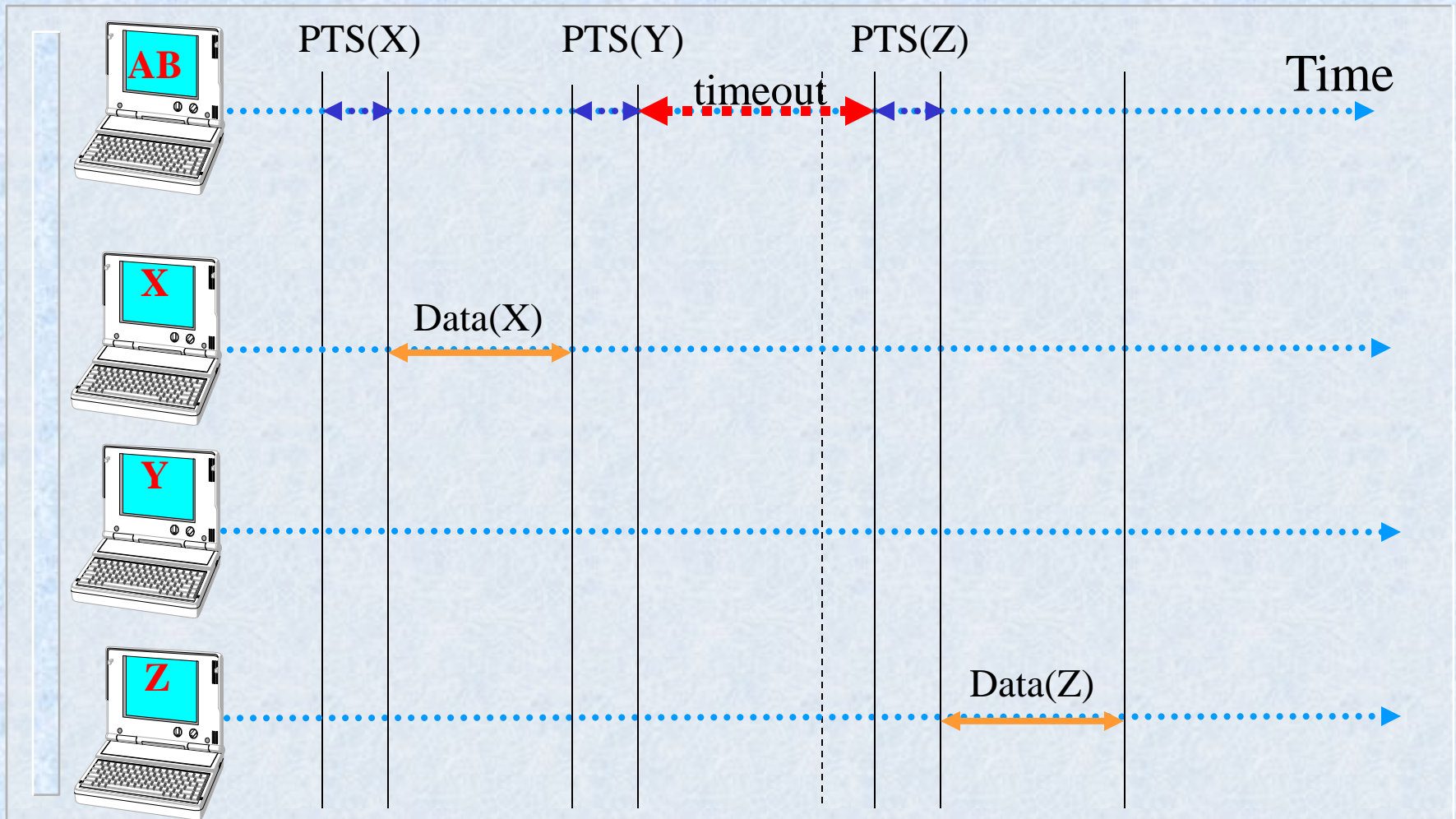
## Point Coordination Function (PCF)



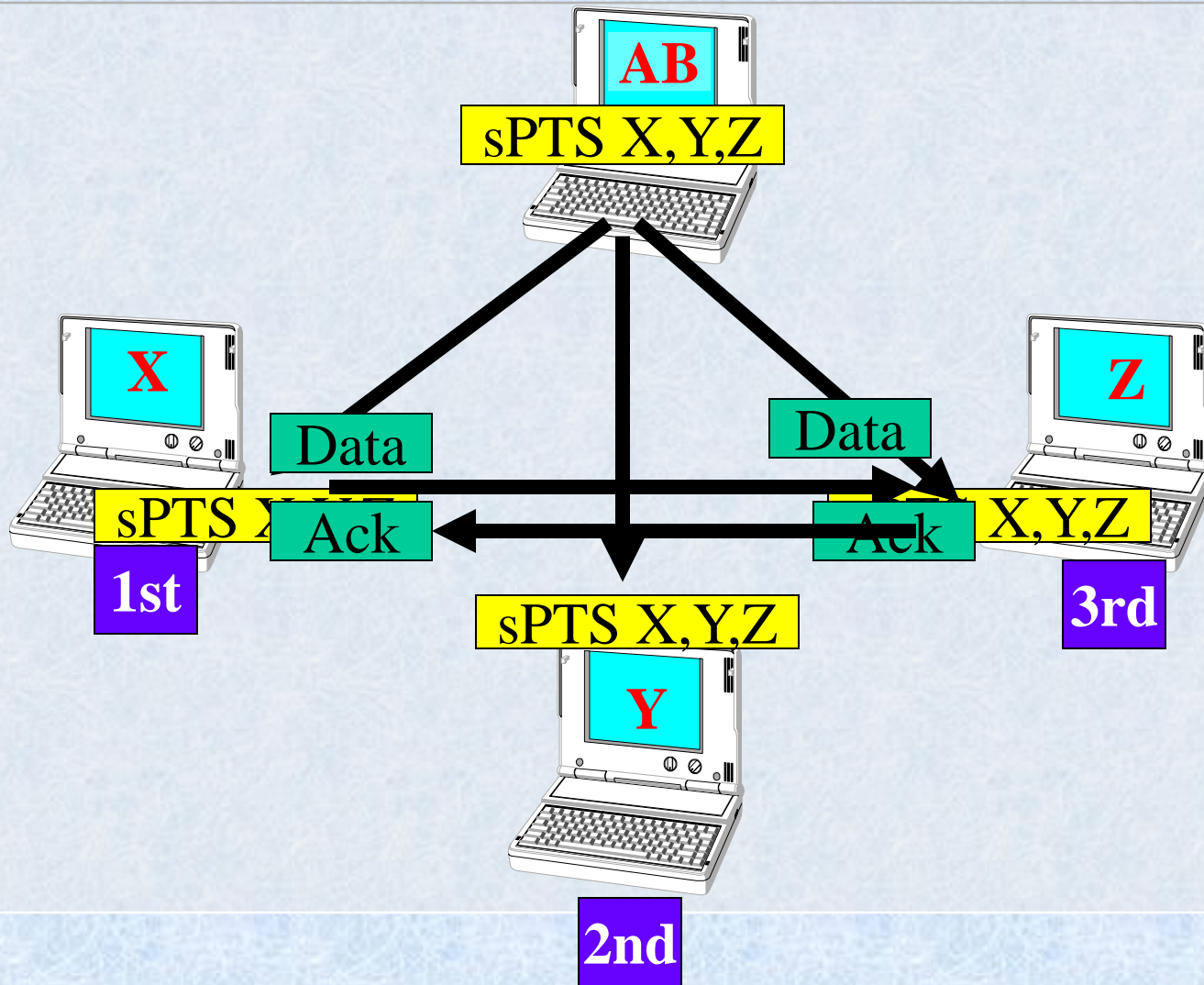
# Single Polling



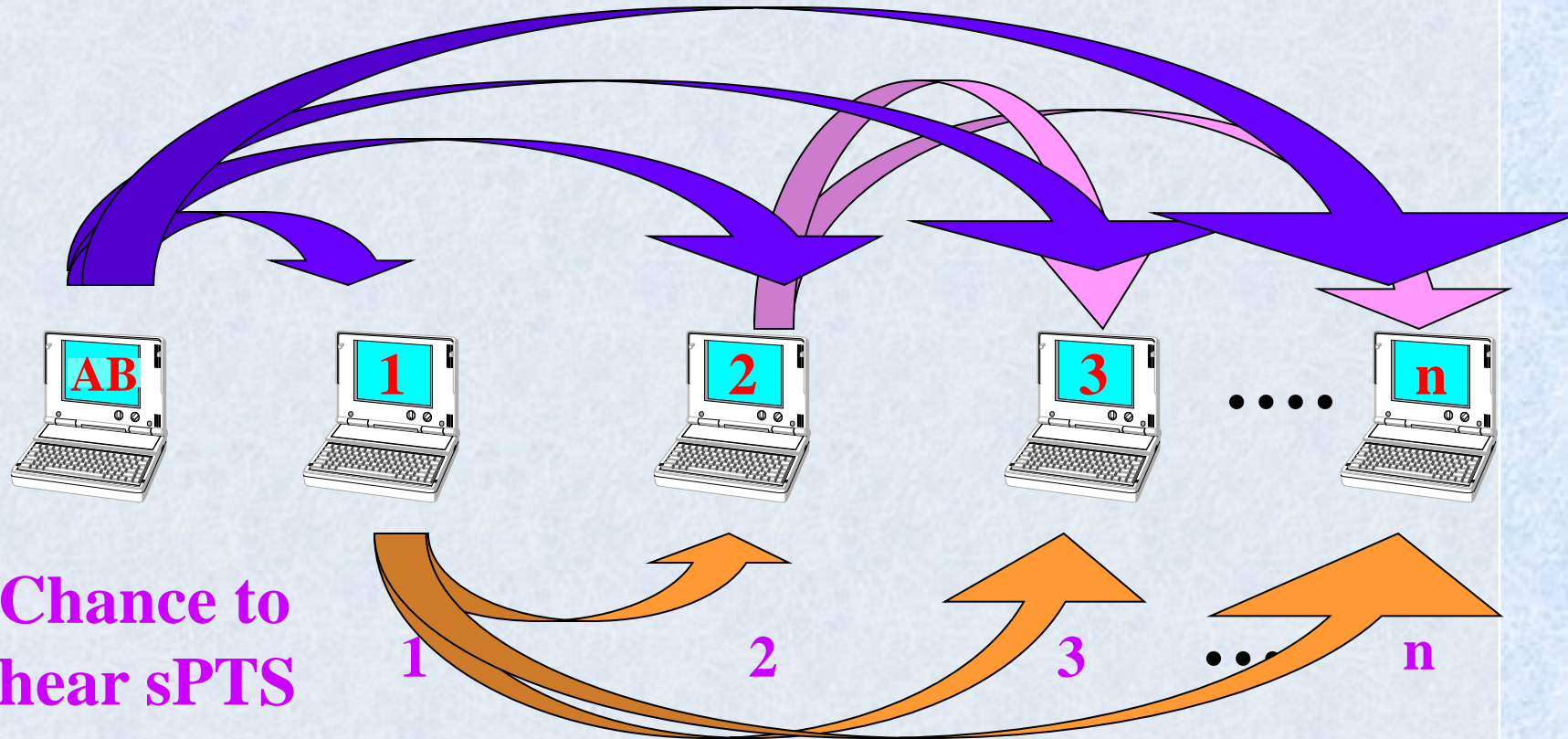
# Single Polling in Noisy Environment



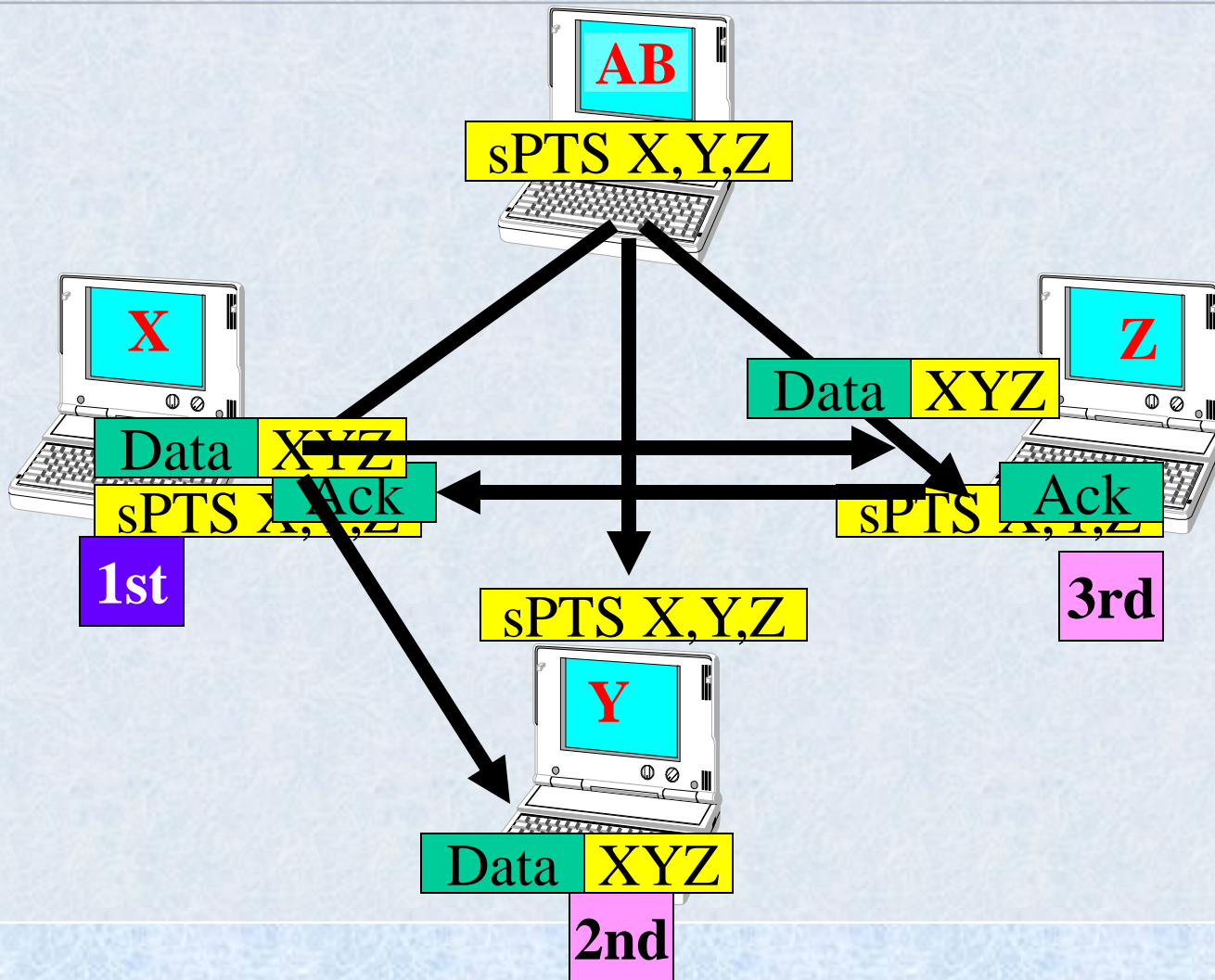
# Proposed solution: SuperPoll with Chaining Approach



# SuperPoll with Chaining

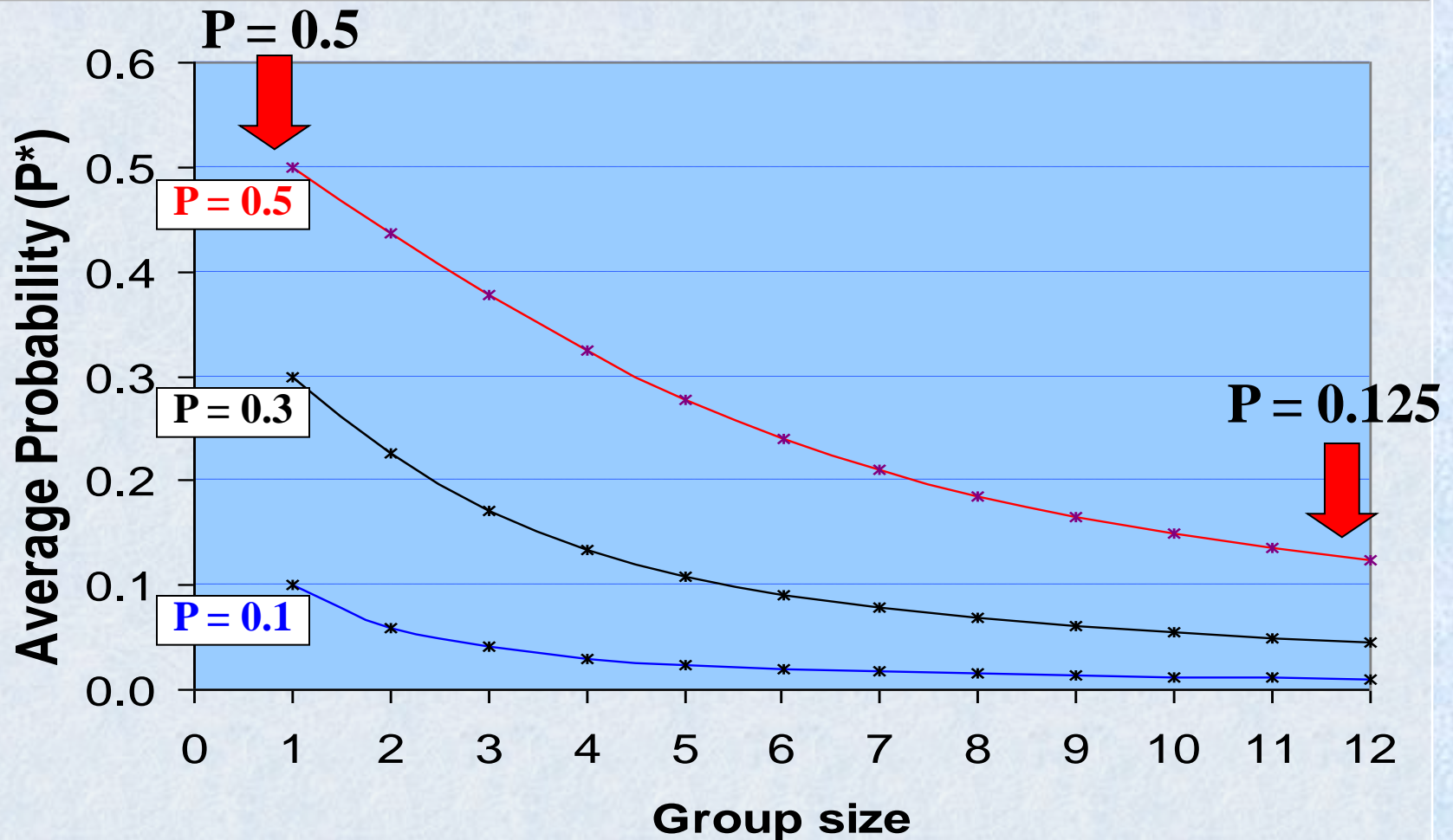


# SuperPoll with Chaining

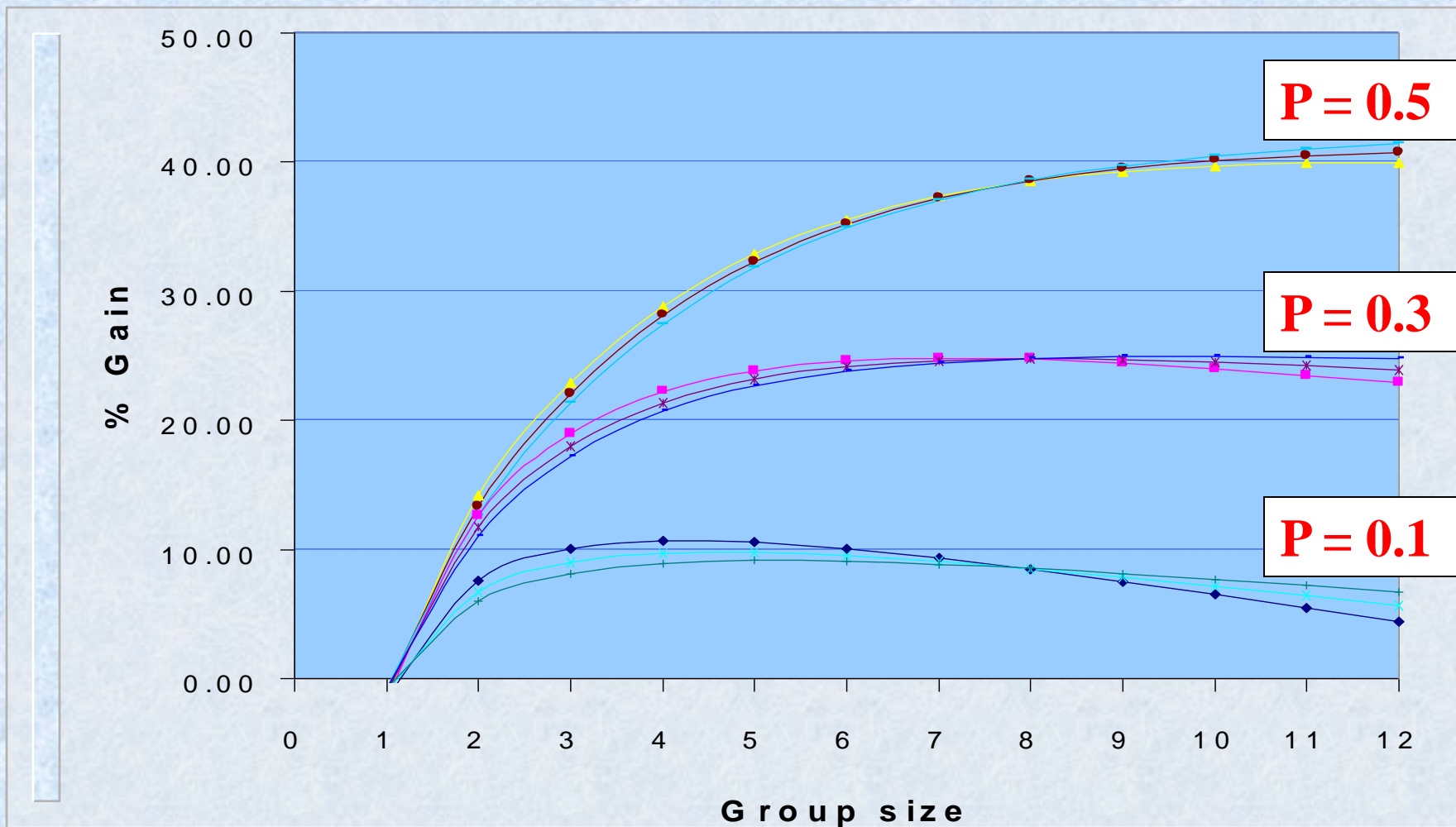




# Average Probability that a station will not receive the SuperPoll



# Efficiency Gain of SuperPoll over Single Poll



# Summary

- SuperPoll is very robust and efficient in noisy environment
- Group size can be adjusted according to station's environment (location, etc.)
- Easy integration within IEEE802.11
- SuperPoll algorithm is more complex than single poll