

















Figure 12: Scalability Results Graph for 100 agents.

perception combination on 20 events. Similar to the above tests, these results are very promising for large scale multi-agent based simulations.

## 7. CONCLUSION

In this paper we discussed Virtual Agent perception combination in large scale multi-agent based simulation systems. We provided results displaying the performance of our perception combination system in multiple scenarios and also showed that the algorithm maintains good execution time even with large numbers of agents. While we only presented results based on the vision, hearing and smell senses, our perception combination algorithm can make use of any number of senses. Future work includes implementing further optimizations of our perception combination system. We would also like to implement features that would allow agents to rely more on highly trusted senses.

Combination of virtual agent perceptions remains a new area of research, with great potential for new ideas. We plan to continue to validate our combination algorithm on new scenarios and improve upon our results.

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