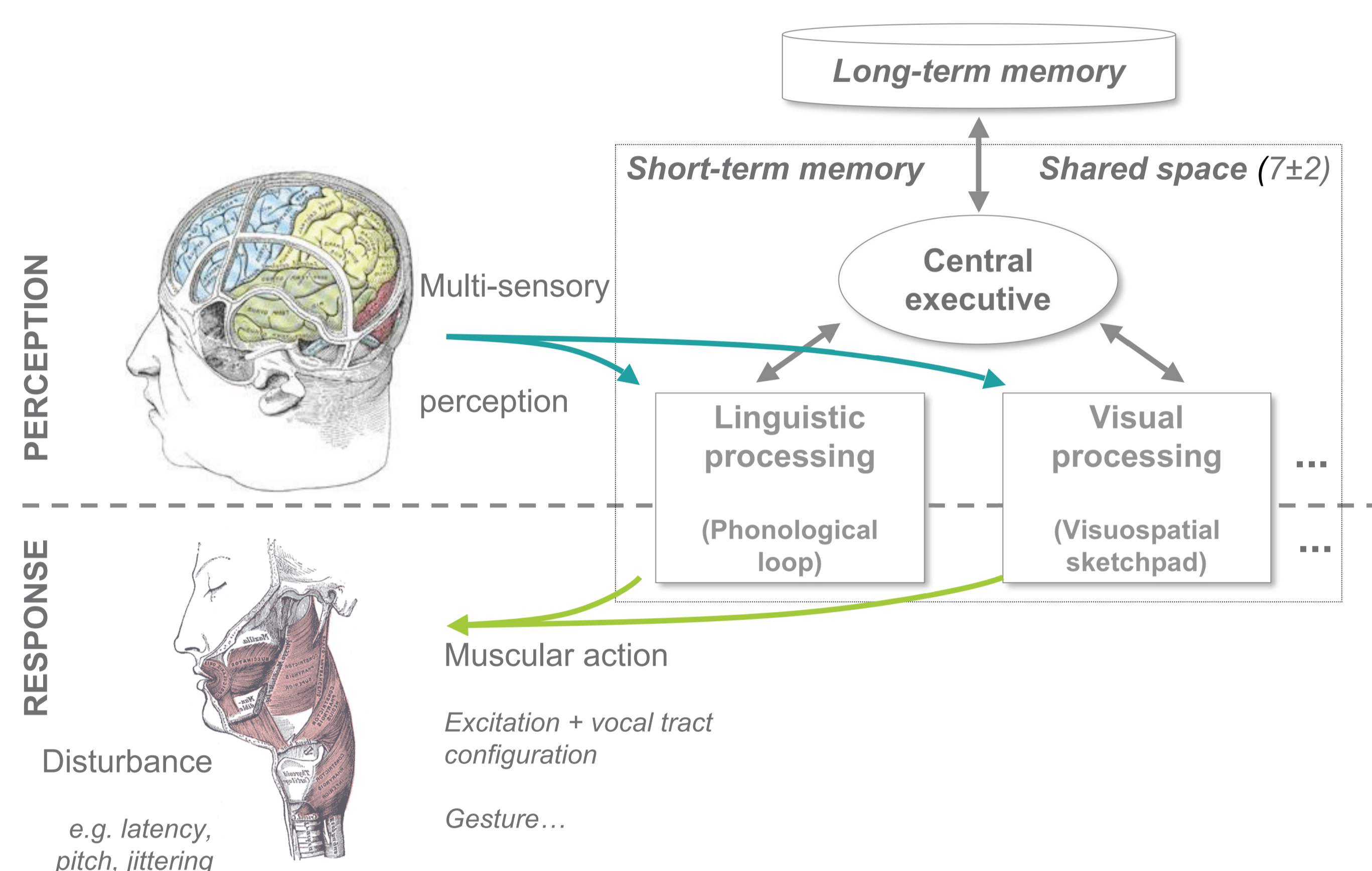


Decision Support for Incident Management



Project Leader: Dr. Fang Chen (Fang.Chen@nicta.com.au)

Core technologies to support decision-making in high-performance and time critical environments, based on real-time, unobtrusive cognitive load measurement, and optimising the human-machine interaction.



At a glance

- Real-time, unobtrusive cognitive load measurement (CLM)
- Integration within decision support systems for adaptive responses
- Reduced economic & social costs through more effective and efficient business processes.

Theory and implementation

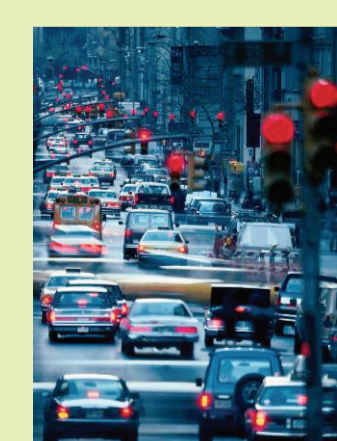
- Limited mental capacity implies disturbed speech and gesture under high load
- Not perceptible by human, but clever signal processing can!
- Statistical models
- Set of speech features and algorithms
- Analysis of grammatical patterns
- Real-time speech-based demonstrator
- Integration in decision systems.

Path to impact

- Real-life data: NSW RTA, air traffic control, Bushfire CRC
- Market validation underway for call centre applications
- Research collaboration with the Australian institute of Sport
- Exploring partnerships in defence, and medical applications.

DSIM Science / Technology

Traffic management
(NSW Roads and Traffic Authority)



Call centres and integrators
(Salmat)



Emergency response, Defence
(Bushfire CRC, SES)



Elite sport, Medical applications
(Australian Institute of Sport)

