The EdgeBatch Framework

- **Global Offloading Strategy – what is the optimal supply chain for all devices?**
- **Local Batching Strategy – what is the optimal batch size for each device?**

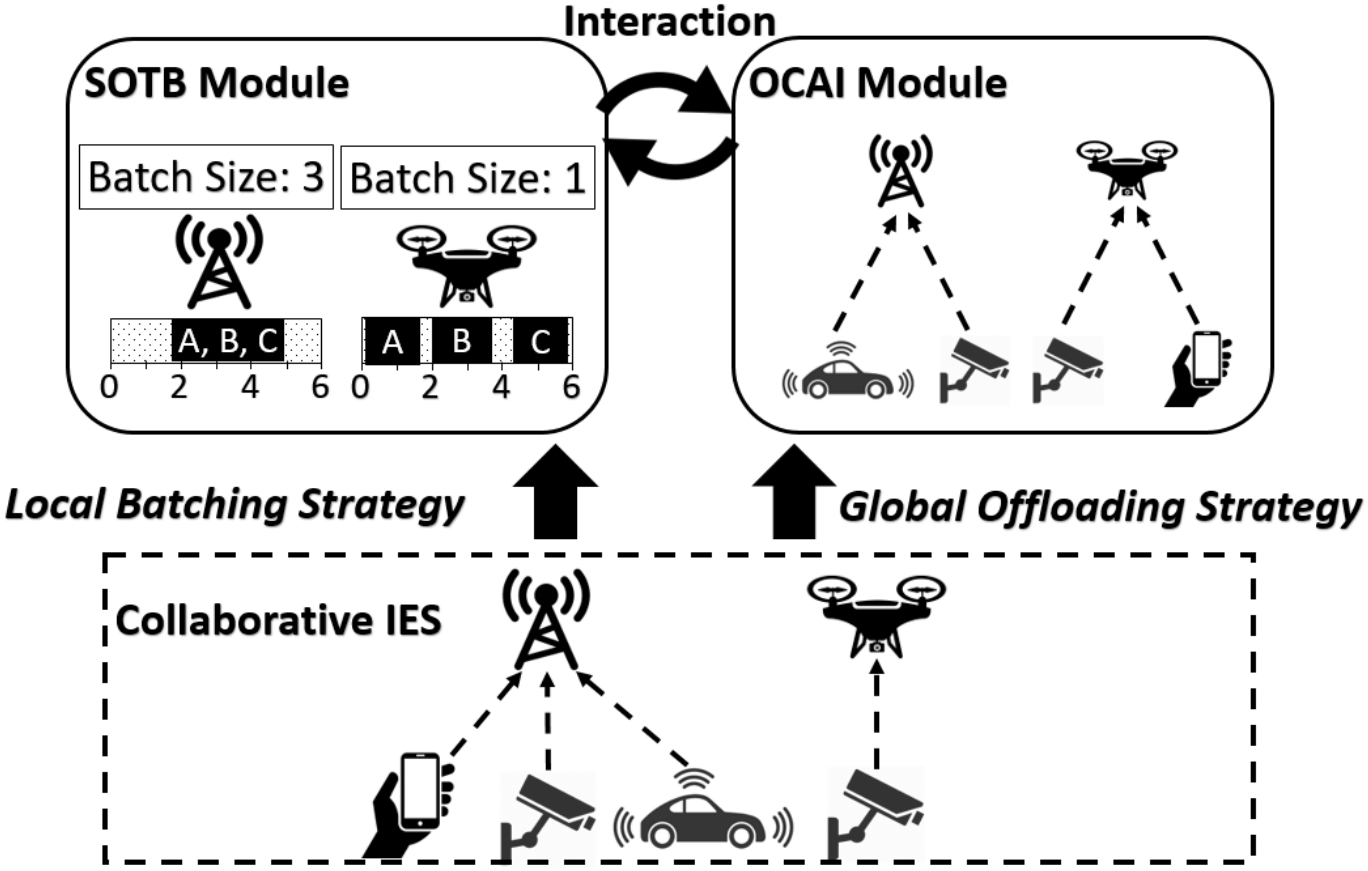


Figure. *EdgeBatch Overview*

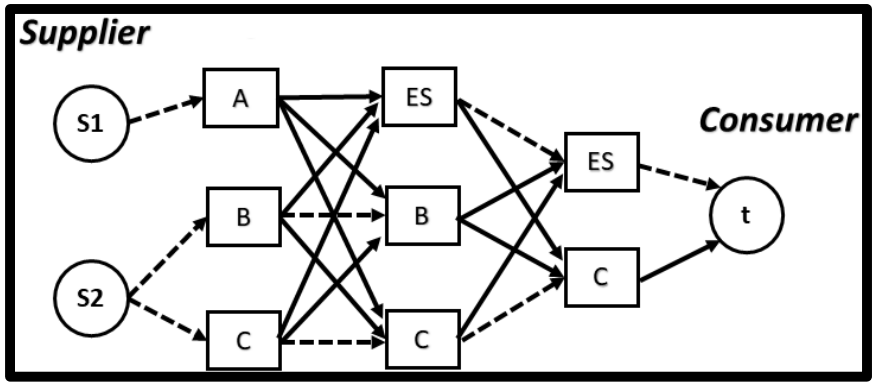


Figure. *OCAI Module*

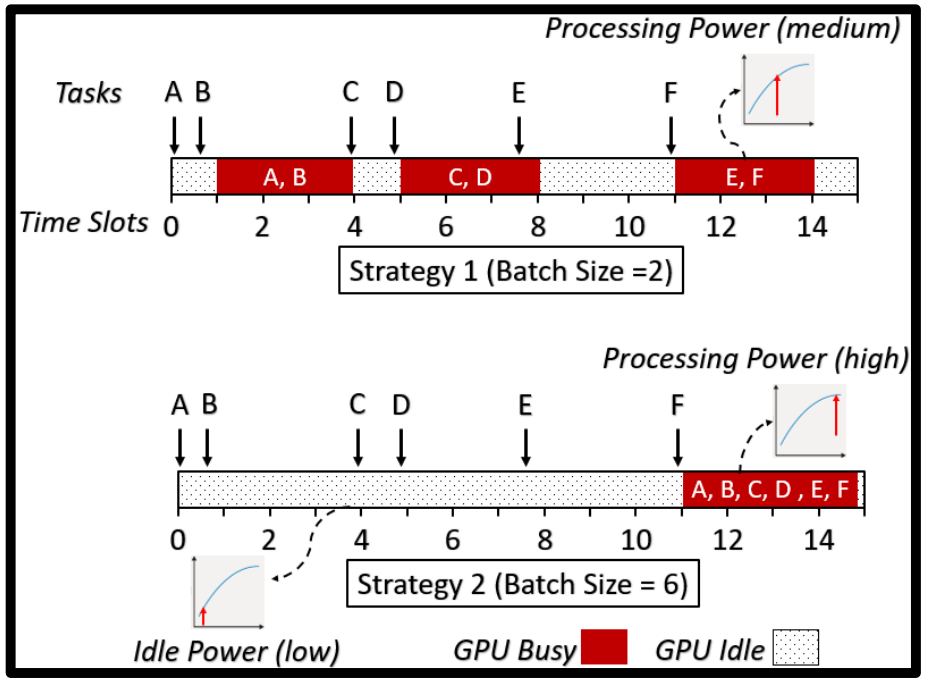


Figure. *SOTB Module*

The Key Findings

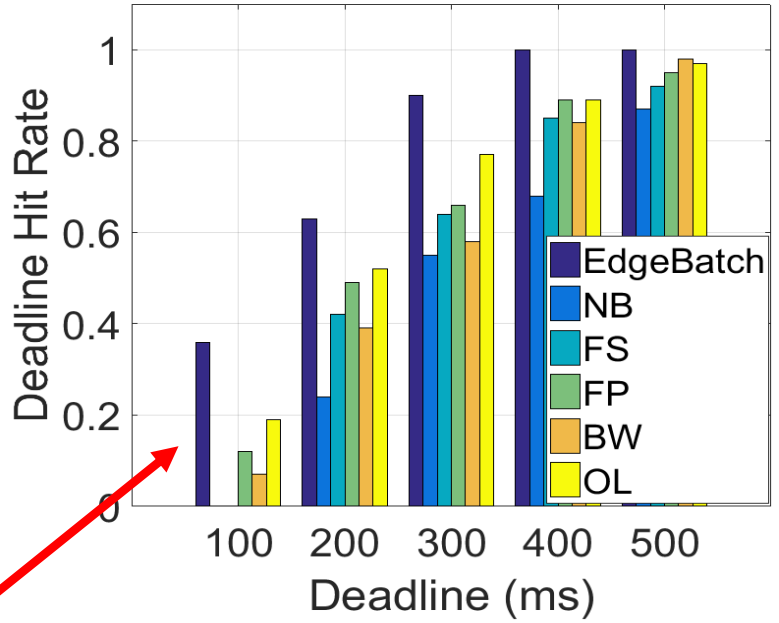
- **The proposed EdgeBatch scheme achieves lowest end-to-end delay and highest deadline hit rate.**
- **EdgeBatch achieves the best energy-delay tradeoff.**

	TX2	TX1	TK1	Pi3	Overall
EdgeBatch	0.802	0.781	0.753	0.633	8.470
BGTA + NB	0.893	0.875	0.879	0.675	9.344
BGTA + FS	0.874	0.865	0.855	0.675	9.238
BGTA + FP	0.852	0.866	0.847	0.675	9.180
BGTA + BW	0.887	0.858	0.840	0.675	9.221
BGTA + OL	0.824	0.827	0.829	0.675	9.011
TDA + NB	0.923	0.903	0.803	0.553	8.576
TDA + FS	0.885	0.864	0.755	0.553	8.326
TDA + FP	0.857	0.841	0.724	0.553	8.162
TDA + BW	0.862	0.852	0.748	0.553	8.242
TDA + OL	0.833	0.839	0.719	0.553	8.100
CoGTA + NB	0.906	0.880	0.843	0.682	9.350
CoGTA + FS	0.875	0.853	0.851	0.682	9.251
CoGTA + FP	0.837	0.832	0.819	0.682	9.068
CoGTA + BW	0.842	0.866	0.830	0.682	9.168
CoGTA + OL	0.822	0.817	0.828	0.682	9.026

"Overall" is the sum of normalized energy consumption of all edge nodes.

Figure. *Normalized Power Consumption*

Our Scheme



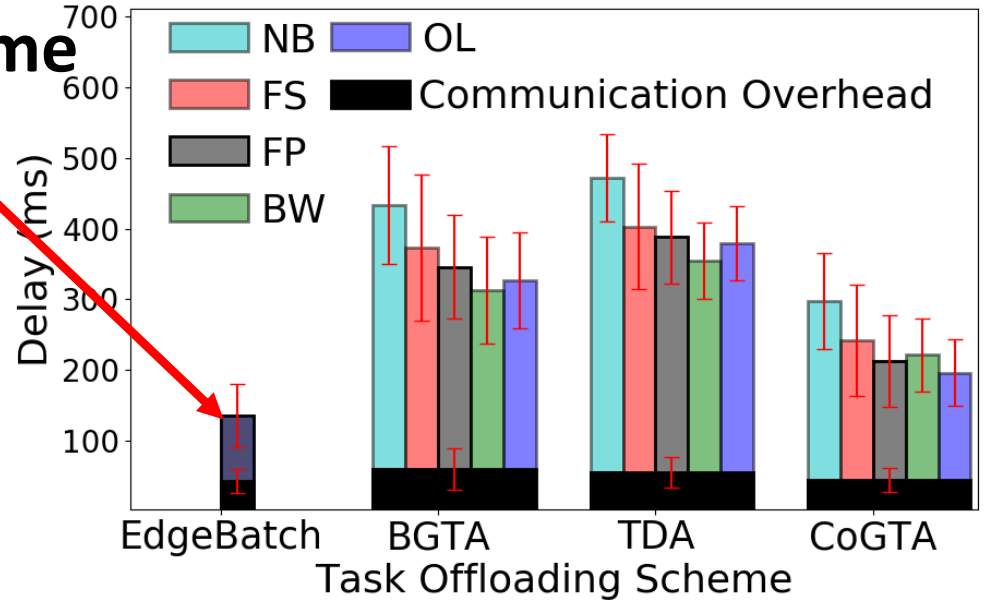


Figure. *End to end delay*