

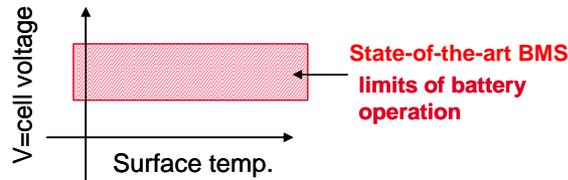
Advanced Battery Management Systems

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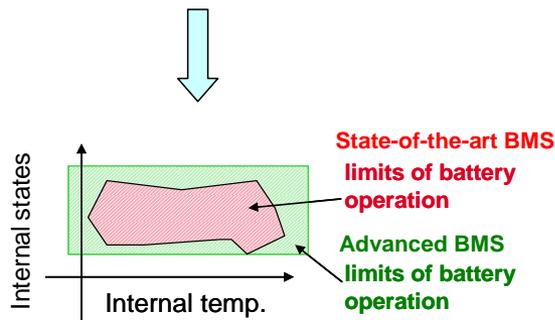
Technology

- Develop advanced battery management system that estimates internal immeasurable states to impose safer constraints on battery operation
- Use of optimal control algorithms to push envelope on charging rates and battery utilization while maintaining battery safety and longevity

State-of-the-art

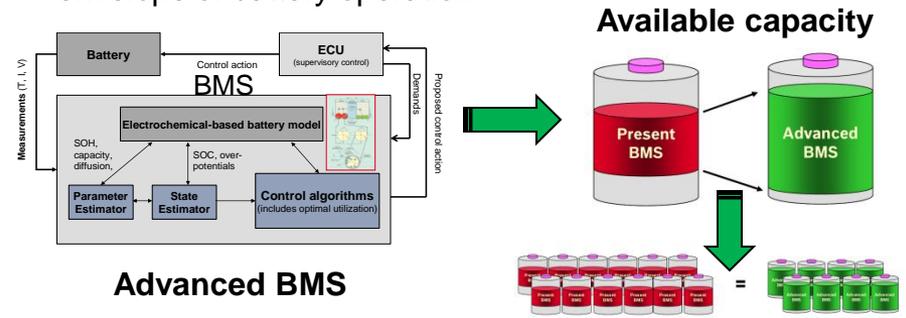


Proposed



Advantage and Differentiation

- Reduce cost of batteries > 25% by increasing the envelope of battery operation



- Reduce charge time by more than 50%, enable higher penetration of EVs

Performance Targets

Metric	State of the Art	Proposed
Cost of battery pack	\$10,000	\$7,500
Charge time from 0% to 80% capacity	30 min to 3 hrs	< 15 min
Available capacity	100%	125% – 133%

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Please contact regarding: press, R&D and demonstration projects

