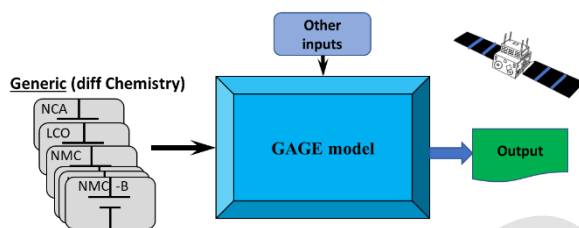


Lithium ion Battery performance estimation model (GAGE) with on-board data

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has indigenously developed software model to estimate battery performance on-board spacecraft without the need for standard capacity testing. This model outputs out the ageing effect in terms of degradation numbers.

Salient Features

- ❖ Applicable to s-p or p-s configured batteries.
- ❖ Covers battery tied /sunlit regulated or regulated bus of spacecraft.
- ❖ Specific to cell type based on proprietary testing on-ground.
- ❖ Could be extended to other applications.



Description

- ✦ Genetic Algorithm based Generic Estimation model for Lithium ion batteries will accept on-board / on-ground test data along other inputs. It estimates deliverable capacity based on any temperature, any current and any duration for the nominal operations.
- ✦ The GAGE Model is extensively used for analysis in various ISRO projects.

Technology Transfer

URSC-ISRO offers to transfer this technology of indigenously developed Genetic Algorithm based Generic Estimation (GAGE) model for Lithium ion battery to industries in India in space arena. To use the model, industries must have Matlab environment & should spare few cells with which the batteries are being made by them. The inputs requirements for GAGE analysis will be intimated on case to case basis.

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