the use of cybernetics in remote sensing, the entire remote sensing system can achieve more automatic and quantitative. However, the paper doesn't use the state equation to reflect the various quantitative relationship between the system input and output. So it's the focus of our future researches on the application of cybernetics in remote sensing.

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APPENDIX

We need to realize the integration research of spatial equipment and digital spatial information, so as to realize the closed-loop control from spatial loading, information acquisition, information application return to spatial loading (the anti-clockwise direction in figure 3). In order to realize closed-loop control, we must study the reverse process of the system (the clockwise direction in figure 3.

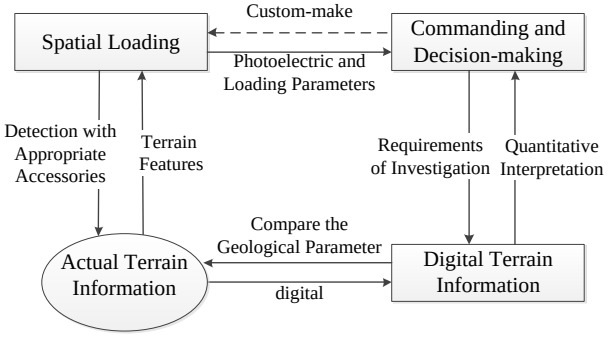

Figure 3. The closed-loop control system of spatial loading and feature information

We can build the integration research of spatial loading and information acquisition, procession, transformation, application base on the idea of cybernetics, and finally, construct a closed-loop control system.

Figure 3 was showed as figure 4 in control flow diagram. This control system includes spatial loading, actual terrain information and digital terrain information. Regard custom of spatial loading as the input, and information of commanding and decision-making as the output. The purpose of closed-loop control system is to feed the output information back to the input.

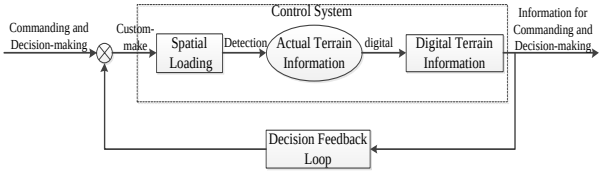

Figure 4. The closed-loop control system of spatial

The fusion of multi-source remote sensing data is another classic application of cybernetics in remote sensing science, as shown in figure 5.

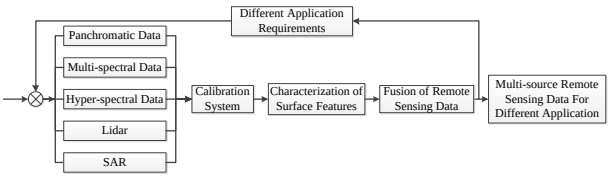

Figure 5. The application of cybernetics in multi-source remote sensing information fusion