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**Baba et al.**

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(54) **EXCAVATION CONTROL SYSTEM FOR HYDRAULIC EXCAVATOR**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(57) **ABSTRACT**

An excavation control system includes a global coordinate computing device, a prediction correcting part, a cutting edge position data generating part, and a designed terrain data generating part. The global coordinate computing device generates revolving unit orientation data (Q) that indicates an orientation of a revolving unit. The prediction correcting part generates corrected revolving unit orientation data (R) by predictively correcting the revolving unit orientation data (Q) based on a delay time (t) and revolve angle speed data (D $\omega$ ) that indicates a revolve angle speed ( $\omega$ ) of the revolving unit. The cutting edge position data generating part generates cutting edge position data (S) that indicates a position of a cutting edge based on reference position data (P1), the revolving unit orientation data (Q), and the corrected revolving unit orientation data (R). The designed terrain data generating part generates designed terrain data (U) based on the cutting edge position data (S) and stereoscopic designed terrain data (T).

**9 Claims, 9 Drawing Sheets**

