Optimizing transformations for skeletal animation

S.A. Ivliev, A.A. Pavel'ev, N.Yu. Ryazanova

Bauman Moscow State Technical University, Moscow, 105005, Russia

The article deals with the motion of objects play graphic scene, set in a skeletal models in real time. An approach to optimization of time required for the formation of an image frame, which consists in the implementation of the combined solution is offered. This includes following: define a set of transformation — a quaternion, scaling factors and transport, and storage and conversion made in the form of the transition matrix.

Keywords: animation, skeletal animation, skeleton, matrix transformations, quaternion.

Ivliev S.A. (b. 1987), a student of the Software and Information Technologies Department of Bauman Moscow State Technical University. Research interests: image processing, pattern recognition, computer graphics.

Pavel'ev A.A. (b. 1961) Senior Lecturer of the Software and Information Technologies Department of Bauman Moscow State Technical University. Research interests: information retrieval, database processing and image conversion. e-mail: pavelyev@bmstu.ru

Ryazanova N.Yu. (b.1951), Ph.D., Assoc. Professor of the Software and Information Technologies Department of Bauman Moscow State Technical University. Author of more than 36 publications. Research interests: building system programming, algorithms of computer graphics. e-mail: ryaz_nu@mail.ru