

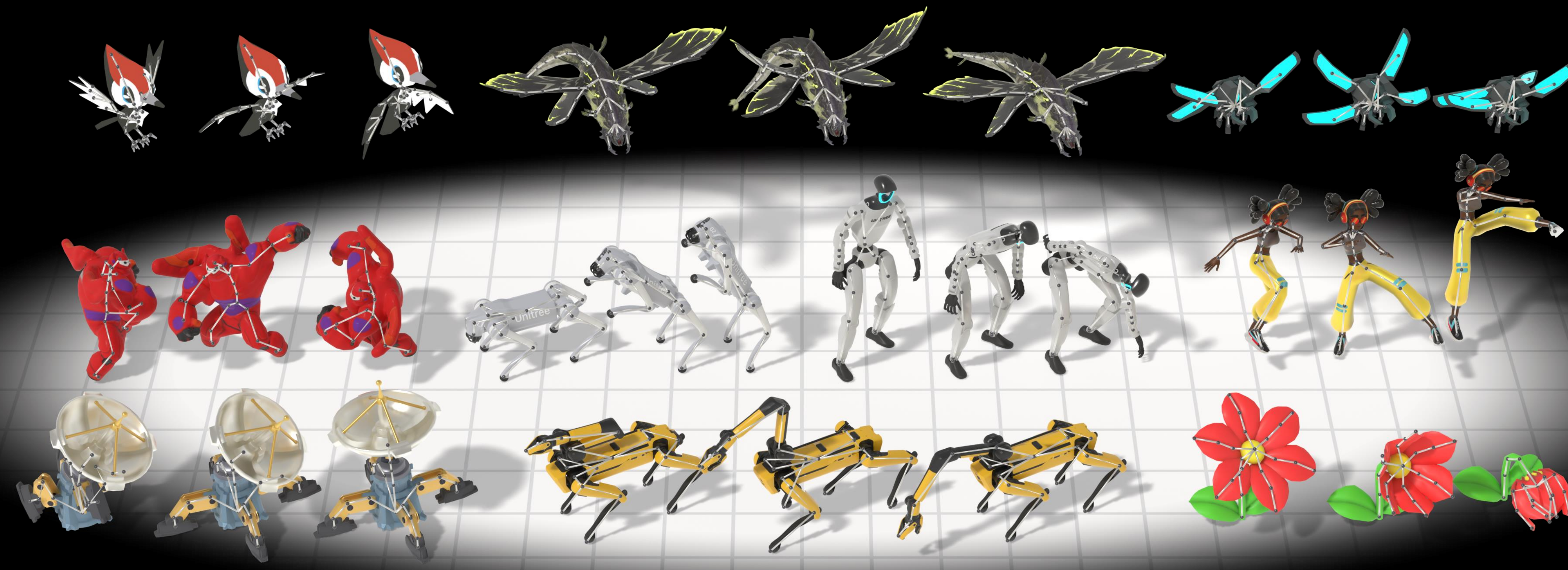


UniMate: One *Unified* Model to Animate *Diverse* Skeletons

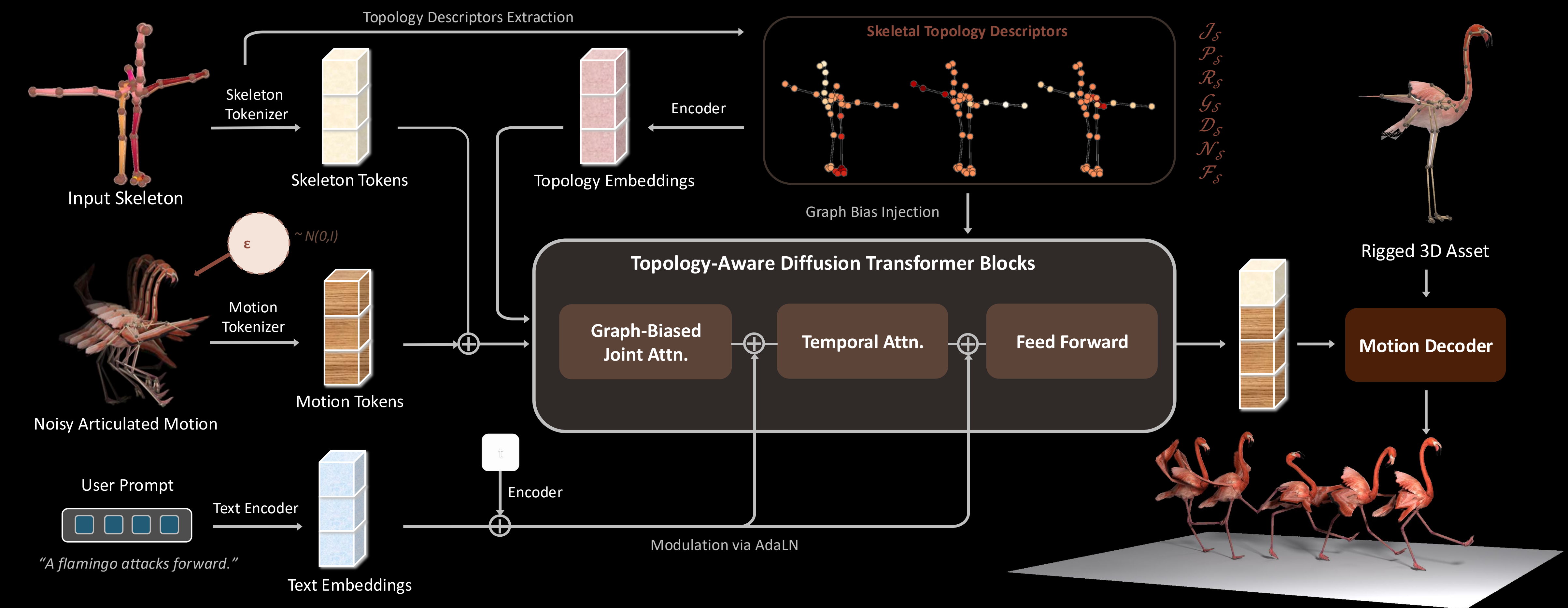
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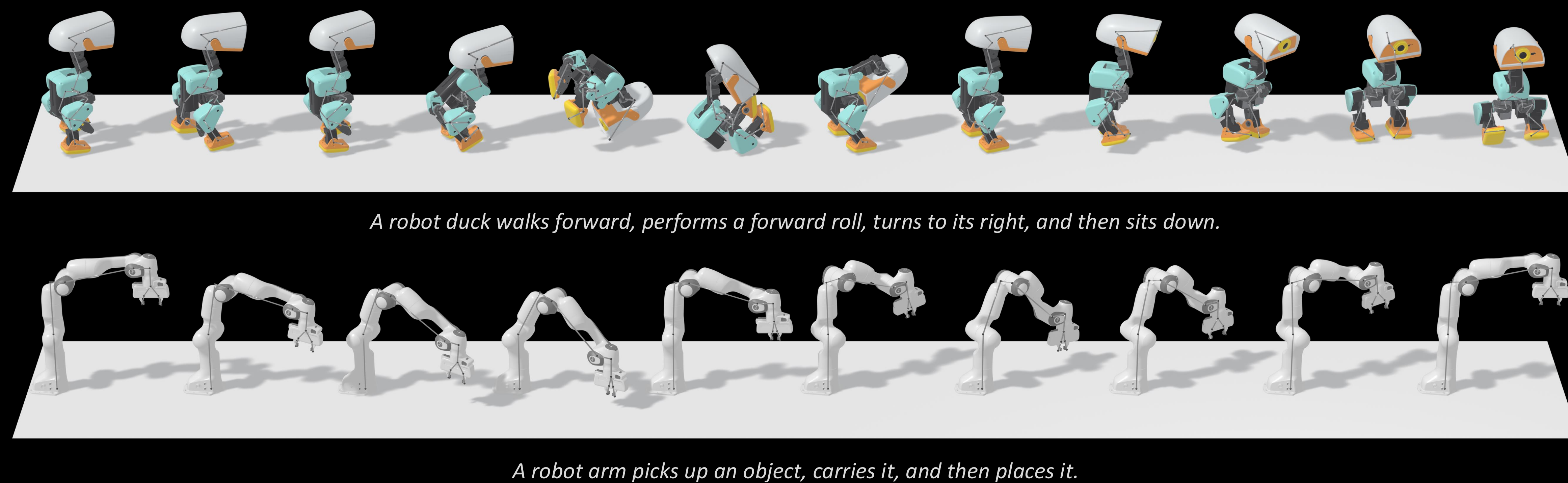
- We propose a unified animation foundation model that synthesizes articulated motion for arbitrary skeletal topologies from a rigged asset and a text prompt.



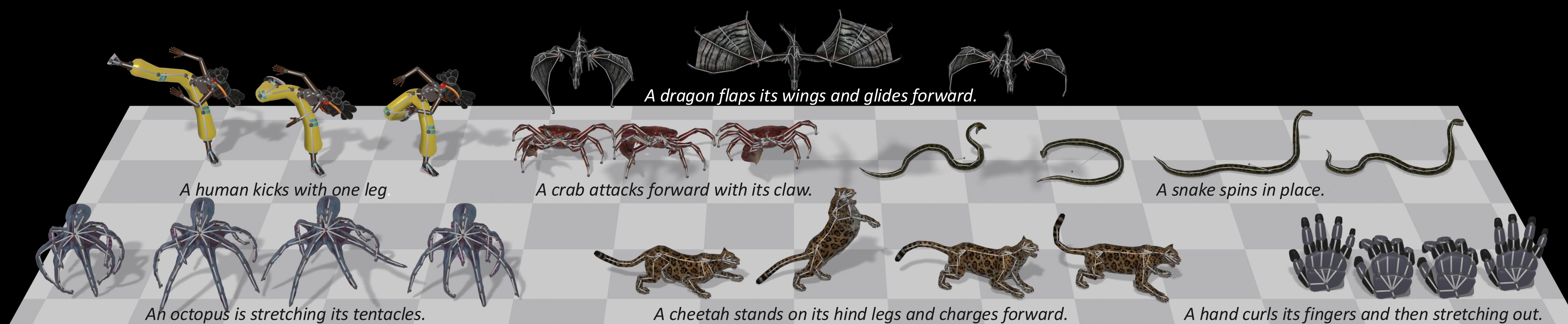
- Topology-Aware Diffusion Transformer operates on a joint token stream of motion and skeletal topology features, while injecting kinematic graph inductive bias.



- UniMate can generate long sequences that stay temporally coherent and drift-free.

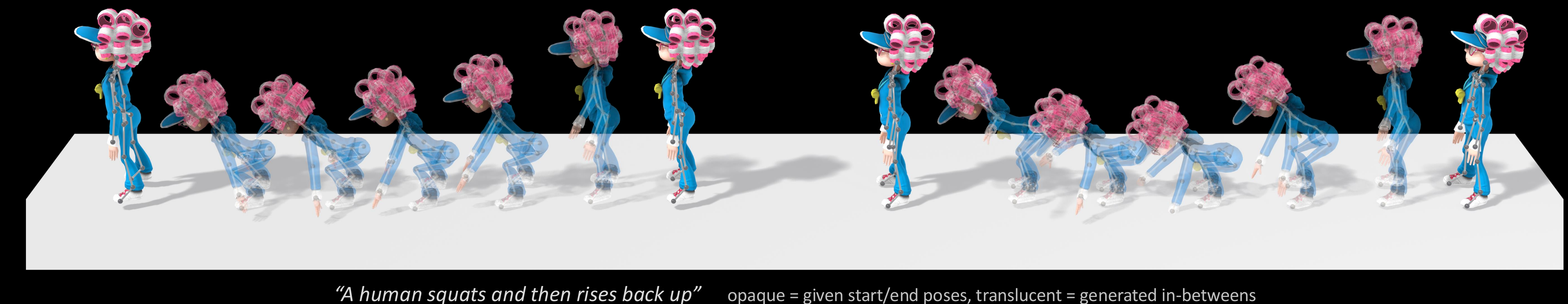


- We curate UniML3D, a large-scale dataset spanning diverse skeletons across bipedal, quadrupedal, avian, marine, insectoid, serpentine, and articulated rigid objects.

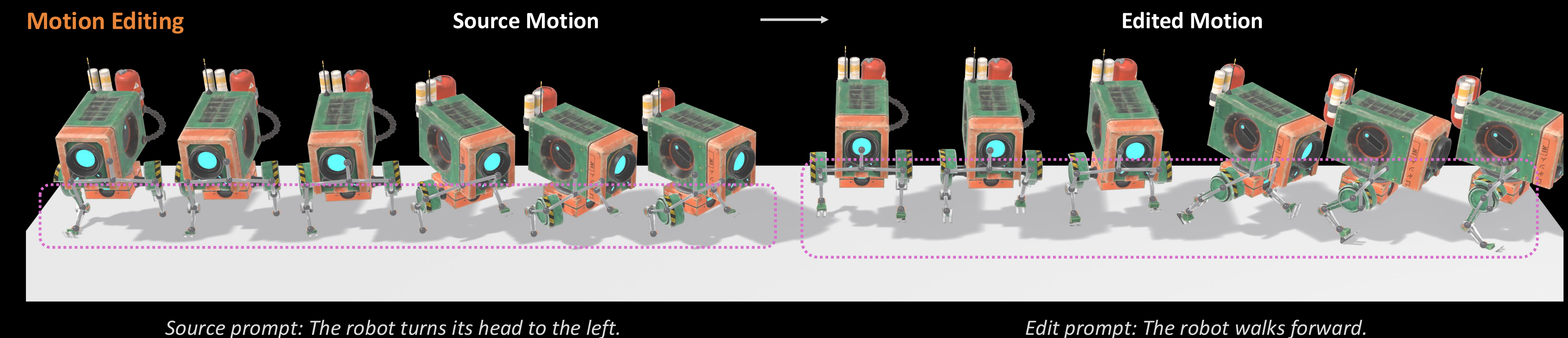


- UniMate supports zero-shot motion in-betweening, text-guided editing and expansion.

Motion In-Betweening



Motion Editing



Motion Expansion

