(a) Skill Transfer Framework I. Task-level subtask sequence II. Motion-level trajectory adaptive III. Physics-level adaptive transfer transfer transfer **End-Effector Pose Q** User **Spatial** Pose **New Task Plan** Relationship **Estimation** $\{S_1, S_2, ..., S_n\}$ Large Estimation Manipulated four-**Transfer Object Pose** Language stage -Model prompt **Spatial** (GPT-40) **Pose Adjustment** For each subtask: **A*** Path Constraint Command Action, Actor, Taget **Planning** Pose Error **Extraction Target Pose** Scene Result **Information** Task 1 KG beside Cabinet Drawer Subtask **Joint Properties** Cabinet Require Obtain Stage1: Grasp the handle of drawer with gripper. <joint type="revolute"> Skill Door Action: grasp Box attachattach **Transfer Actor:** gripper Final state <child name="door"/> **Initial state** Cabinet Target: the handle of drawer <parent name="cabinet"/> (d) State graph (c) Task graph (e) Scene graph (b) Skill Library Task 2 (New Scene)