Cinematographic Camera Diffusion Model - Supplementary

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1. Expert feedback

Here, we include summarized transcripts and principal comments from experts on our tools. Experts watch the demonstration video and are asked to comment on these points: (i) general comment; (ii) the pros and cons of our tools; and (iii) the potential of the developed tools.

Expert 1: Commercial Director / Director of Photography (DoP) *"This tool effectively addresses some communication issues between cinematographers and directors during the pre-shooting phase, saving time and even helping actors understand the scene visually during table reads. However, it might be overly technical for non-professionals who may struggle to replicate the envisioned scenes. I'm not familiar with its ease of use and convenience. Directors can use this straightforward display for cinematography and scene production. It reminds me of a simplified version of a tool we used before, which provided a clear trajectory and overall effect after rehearsal. My only concern, which I'm not sure is a drawback, is that I haven't experienced this software myself and don't know how difficult it is to operate. I would primarily use it for rehearsal purposes, considering the time required for preparation."*

Expert 2: VFX Director / Artist *"There are two directions (of usage)for this tool: live-action and pure CG rendering. For instance, consider a script like 'James Bond excitedly jumps up at the plan.' Virtual human images, like MetaHuman, and script-driven actions on platforms like Blender are already being developed. The final step is the camera work. We've already achieved text-based camera movement settings, like slow push-ins and rotational shots. Since film camera movements are patterned, AI can learn and execute them at a standard cinematographer level. In the long term, not every shot might need specific instructions, only the crucial ones. For live-action, AI could drive electronic filming equipment like telescopic cannons and robotic arms for rehearsal. Minor trajectory adjustments might be needed. For pure CG films, the cost and efficiency are very attractive, potentially risking the jobs of animators responsible for virtual camera movements. the tool can ensure above-average quality, raising the industry's average level. However, it might limit creativity, making everything look too standardized, like fast food."*

Expert 3: Director of Photography (DoP) of Feature Films *"I believe this tool has limited significance for feature-length film production. At this stage, our medium-budget films don't heavily rely on previsualization (previz), and some are even still shot on film. The language control aspect of this tool is too vague for professional requirements. However, I can see its effectiveness for short films, low-budget films, and amateur filmmakers, especially in mobile cinematography e.g. for TiKTok-like applications. The downside is its unclear positioning for professional users. On another note, filmmaking involves more than just the camera control. Sometimes, camera control needs to consider the set, mise-en-scene, and even lighting. Currently, I don't see this tool taking these aspects into account."*

Expert 4: Producer of Feature Films (same group as R3) *"I find this tool meaningful and potential. Film production is increasingly fast-paced. Considering the need to produce long works in short periods, maintaining consistency and convenience at each stage is challenging. This tool offers great potential, especially for technical rehearsals/previz, significantly reducing costs and speeding up the process. However, I agree that using only language for control seems limited in diversity and control. I also agree that in the short video market, this technology could be revolutionary, as most short video creators don't know how to effectively do camera work."*

Expert 5: Previs / Artist *"I think it's a very good tool to get a first camera pass. To help the director validate the staging, the set, and the first camera intentions. Regarding solving practical problems, as it quickly gives a first camera pass, possible problems can be quickly removed. In production it is known, that the earlier the problem is detected, the better the chance to be solved. In addition, this tool could give a time of observation and reflection to the beginner, the non-professional, and even the professional. Before going ahead and doing different tests, this tool allows you to save a lot of time in derushing. The main advantage is the time saved for observation and reflection, before asking the right questions and making the right cameras. The disadvantage could be to stay on what this tool proposes, but that is a story of know-how and willingness to push the staging further."*