D2.1 REPORT ON SCENARIO USE-CASES AND PIPELINES FOR VIRTUAL SENTIENT AGENT

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Abstract	This document presents the results of the Task 2.1 Scenarios and Pipelines (M1 – M6). The task consolidated the scenarios of use for demonstration and evaluation, and the pipelines for ensuring integration and multiple output.
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1. INTRODUCTION

The vision in the PRESENT project is to create virtual digital humans—sentient agents—that look entirely naturalistic, demonstrate emotional sensitivity, establish an engaging dialogue, add sense to the experience, and act as trustworthy guardians and guides in the interfaces for AR, VR, and more traditional forms of media.

This document presents the results of the Task 2.1 Scenarios and Pipelines (M1 – M6). The task consolidated the scenarios of use for demonstration and evaluation, and the pipelines for ensuring integration and multiple output.

The users represent the industry stakeholders in the filming, broadcast media and entertainment industry we are specifying the requirements for:

- **CREW** explores how the agent can evolve towards sentience in response to the emotional and cognitive reactions of the user, and how the interaction can be productive for the user in live performances. CREW will do this with several smaller use cases on a more experimental basis in order to find out and to experience the best solutions. Some of these use cases will be more developed than others.

- **BRA** envisages a sports programme where the virtual agent knows the statistics and situations occurring in several soccer matches under analysis. The talent and guests talk together and with the agent, which will not only answer questions but also present virtual graphics and charts, making eye contact with the presenter or with the audience.

- **FS** explores three professional use cases with very high impact in the media industry: optimised animation oriented to directors and VFX supervisors; character generation and shot planning within virtual production, involving storyboard and pre-vis artists and editors; and programs based on interaction with key characters.

The main objective of this deliverable is to:
- Determine the different modes and environments where PRESENT will be used.
- Study the inherent peculiarities relative to each of these environments.
- Find the common requirements to all use cases and also those particular to each of them.

To achieve these objectives, the Consortium has described five use cases proposed by the industry stakeholders above mentioned, with different complexities and including general descriptions of each use case, an example dialog and script and the pipelines or workflows required for its further implementation. All of this is necessary to define the main requirements for each use case. The list of use cases could be extended to include a simpler scenario where the different technologies used in the project could be rapidly deployed and tested

This document summarizes all the requirements in a list of clear and specific requirements. This output needs to be considered in the architecture and in the further development to ensure the appropriate implementation and demonstration of the use cases described and presented in this deliverable D.2.1.- Report on Scenario use-cases and Pipelines for Virtual Sentient Agent.

This deliverable is the main input for the Task 2.2 Module Architecture Requirements and Task 2.3 Interface Protocols and APIs since the architecture of the project has to be designed according to the requirements obtained from the use cases analysis. The workflows and pipelines presented in this report will be also essential to communicate and integrate the character in the use cases.