## 360° Video for research communication and dissemination: a case study and guidelines

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## Abstract-

Introduction: 360° videos are increasingly popular channels for science communication and higher education; however, time-limited 360° videos that disseminate scientific research via platforms like YouTube remain underexamined. To address this problem, this experience report reviews the creation and evaluation of six 2D video interviews and six 360° video tours. About the case: The European Commission's Joint Research Centre (JRC) and other public-facing organizations already publish 2D videos on social media channels and host 360° video content on their institutional websites. This case addresses the affordances and constraints of creating short 360° videos for publication on public-facing platforms. Situating the case: 360° video content has been incorporated into science communication and pedagogical practices in higher education. The authors review these developments and show the need for further research on time-limited 360° Methods/approach: Scientists researching energy-related technologies were invited to record 2D video interviews. Based on these interviews, six transcripts for 360° videos were drafted and recorded in the same lab settings. When the videos were published, European researchers and communication professionals were recruited to complete a short survey evaluating the videos' relative merits. Results/discussion: The survey results (n = 32)suggest a similar overall quality of the 2D video interviews and 360° video tours. Respondents ranked the interviewee or narrator as the best feature of both the 2D and 360° format, and 47% said that they would prefer to have a 360° video created about their research. Based on our experience, we provide guidelines related to the production and publication of short 360° videos. Conclusion: Further research and practice are required to understand which specific features of the 360° videos are most effective and whether this technology offers distinct advantages as a tool for dissemination. Further research and practice will establish more detailed approaches to 360° video.

Index Terms- 360 video, immersive video, research dissemination, science communication, YouTube.

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