

Utilization of Internet-Based Live Video Streaming as An Alternative Media for Campus Television

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Abstract

Advances in communication technology that is so dynamic in the all-digital era now also penetrated the television media. Many platforms use the internet to reach a wider audience. No exception on-campus community television such as Suska TV using the Youtube account "Suska TV Official" took part in providing information to the campus community. The purpose of this study was to determine the extent of internet-based live streaming video into alternative communication media at Suska TV. The research method uses an interpretive paradigm with a case study approach. Data collection techniques using observation, in-depth interviews, and online search. The results found 3 factors utilizing live streaming video using virtual mixer technology and internet networks in Suska TV. First, it can generate live shows anywhere. Production of news broadcasts, campus programs, and events does not have to be done in Suska TV studios. Second, Following communication technology trends. Through a YouTube account, it gives freedom for the campus community to choose to watch the programs they want from their respective gadgets. Third, this alternative communication media makes it easy for Suska TV as a community television to continue to be productive through broadcast digitalization.

Keywords: Live Streaming Video, Television, Alternative Media Communication

Introduction

In the digital era nowadays, communication technology advances are increasingly massive. Broadcasting activities through various media platforms have become commonplace. This was triggered by the spread of media digitalization. The users' behavior changes overtime, frequently we meet individuals who get to the Internet without knowing the time limit. This activity is carried out wherever and whenever. Furthermore, there are many platforms with various options and interesting features available so that they reach a wider audience.

Television is one example of technological development and has a great influence on people's lives. The industry has experienced technological and structural changes in the past decade.¹ Advances in communication technology that is so dynamic in the all-digital era now also penetrated the television media. Many television stations in Indonesia are also utilizing digital services and are starting to abandon conventional broadcasting methods. To reach a wider audience, it's undoubtedly television shows are now also reaching content that can be accessed through internet-based live streaming broadcasts.

As far as television innovation, there is a term called Smart TV or Hybrid TV that is connected to the Internet or convergence technology that connects computers, television sets and set-top boxes, for

¹ ("Y.Shim and D.H. Shin, "Analyzing the Development of 4th Generation Mobile Network in China : Actor Network Theory Perspektive, " Info Vol. 17. No. 1, pp 22-38, Jan. 2015," n.d.)

example, Google TV and Apple TV.² At present, many television shows are competing to use various platforms to stay alive. The high mobility of everyday audiences requires television shows to be enjoyed not only in the home but also anywhere. One of them, many television programs that broadcast shows via new media. Call it through streaming websites or with a touch of other new media or more familiar with the term social media, like Youtube, Instagram TV and so forth.

Internet-based television shows that utilizing the social media have recently begun to increase their audience. This has certainly become a special interest especially for information providers and business operators. Internet-based shows on social media are considered effective for promoting the products and services offered. Moreover, if the target audience is young people like Gen Y (Millennial) and Gen Z.

Referring to some recent communications research, young generation, for example Gen Z, tends to prefer watching television through social media platforms compared to conventional television at home. There are some interesting motives for them to always use social media, first, as a place of self-existence, second to follow the style in relationships and third, namely to want to earn income from social media.³

The high use of the Internet in Indonesia is progressively gigantic from year to year. The survey results from the Polling Indonesia in collaboration with the Association of Indonesian Internet Service Providers (APJII), the number of Internet users in Indonesia grew by 10.12 percent. This field data was taken during the period from March to 14 April 2019. According to the Secretary General of APJII, Henri Kasyfi, from a total population of 264 million people in Indonesia, there were 171.17 million people or around 64.8 percent who have been connected to the Internet.⁴

As shown by the phenomenon as above, it isn't astounding that numerous TV media in Indonesia are contending to communicate their shows through media convergence on the web. The community television is no exemption. Community television is a media established by a particular group in a region with the aim of being a forum for information for that group.

Up to this point, the quantity of community TV in Indonesia can be said to have not grown too fundamentally. This happens in light of the fact that there are genuinely severe limitations and rules given by the Ministry of Communication and Information Technology (Kemkominfo) for authorization to air the community TV. In addition to the establishment permit, the broadcast radius is just restricted to 2.5 kilometers with a maximum transmit power of 50 watts. Likewise, the TV channel must utilize recurrence stations dependent on specialized investigations that do not interfere with local or national private TV. Concerning the authorizing procedure, it isn't entirely different from how the private area presents a grant through the Local Indonesian Broadcasting Commission (KPID). To date, there have been 13 network TV channels that have acquired authority-broadcasting licenses in Indonesia.⁵ One of the community television stations within the Sultan Syarif Kasim State Islamic University (UIN Suska) Riau is SUSKA TV.

This campus television has obtained an establishment permit since November 10, 2017. Since its establishment, SUSKA TV has had several programs and collaborations with various parties, which are certainly very helpful to the campus academic community to get information. However, to date, SUSKA TV does not have a broadcast license in analogue because of a moratorium from the Minister of Communication and Information.

The Minister of Communication and Information of the Republic of Indonesia issues Circular Letter Number 1 of 2017 concerning the Moratorium on New Applications for Analogous Television

² ("A. Boztas, A.R. J. Riethoven, and M. Roeloff, "Smart TV Forensics ; Digital Traces on Television, " Digit. Investig., Vol. 12, pp. S72-S80, Mar. 2015," n.d.)

³ (Anwar, 2019)

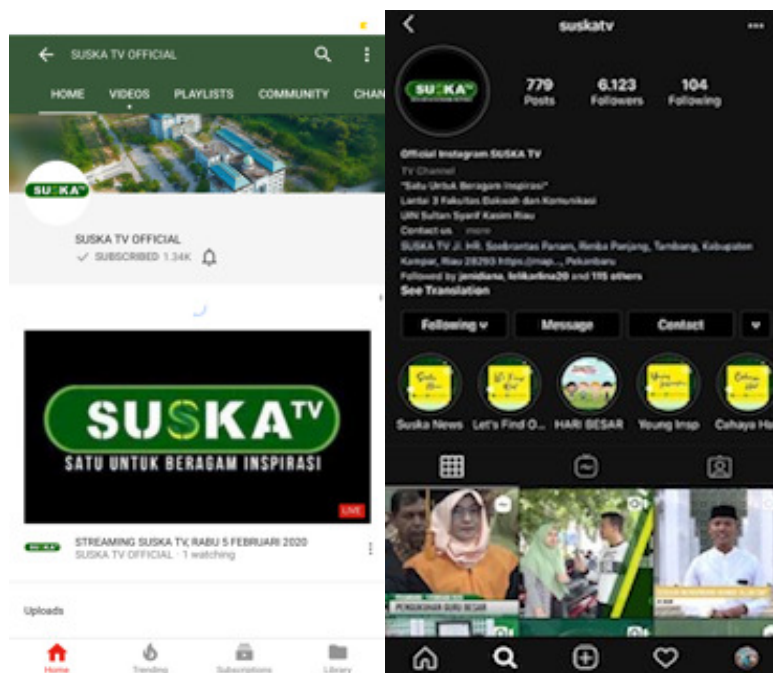
⁴ (Media, n.d.)

⁵ (KOMINFO, n.d.)

Broadcasting Services Licenses through Terrestrial since February 6, 2017 until an undetermined deadline. However, this moratorium does not apply to applications for new licenses and expansion of broadcast coverage in the Disadvantaged, Frontier and Outermost (3T) areas as long as the service area is still available by following the radio frequency master plan for analog TV broadcasting purposes.⁶

With the existence of this Ministry of Communication and Information moratorium, SUSKA TV could not broadcast analog shows from the beginning. However, SUSKA TV tries to take advantage of the opportunity of digitization by showing internet-based production through the YouTube channel "SUSKA TV Official" and the SUSKA TV Instagram Account. This step is considered as an alternative solution so that SUSKA TV information shows can continue to be enjoyed by the campus academic community. Currently, there are 5 SUSKA TV programs that can be watched, including, Suska News, Cahaya Hati, *Young Inspiration*, *Let's Find Out* and *Top List*. The program was welcomed by the academics on campus and off campus. This is evident from the number of active followers on SUSKA TV's Instagram account, which has reached 6123 followers. In addition, the number of subscribers on the YouTube channel "SUSKA TV Official" has exceeded 1034 subscribers.

Some Suska TV programs are broadcast live streaming through the Youtube channel. Usually live streaming is done at official events such as the Flag Ceremony in commemoration of state holidays, graduation processions, seminars, and other official events. Live streaming broadcasts utilize virtual mixer (VMix) Pro 17 so that the audience of Suska TV viewers can enjoy multi-camera shows like watching television on a television screen. The purpose of this study was to determine the extent of Internet network-based live streaming video by utilizing virtual mixer technology to become an alternative communication media in Suska TV. This live streaming video based on Internet network is a form of application of new media theory.



Picture 1: (Right) Suska TV' Instagram Account and

(Left) Suska TV Official' Youtube Channel

⁶ (KOMINFO, n.d.)

As quoted by Mark Poster in Littlejohn, new media theory is about a new period in which interactive technology and network communication, especially cyberspace, will affect society. In this article we will explain how to use new media in the development of campus community television broadcasts.⁷

The utilization of new media and old mainstream media has become a kind of media convergence. This is happening more and more around us. Many televisions incorporate new and old media in the production process, as well as in terms of promotion. New media is a variety of communication technology devices that share the same characteristics, which apart from being new, is possible with its wide digitalization and availability for personal use as a communication tool.⁸

Lia Kurniawati from Kridatama Polytechnic conducted previous studies according to the theme of this study in March 2019. Lia raised the title on Utilization of Video Streaming Technology at LPP TVRI West Java. This research focuses on the integration of information technology, information technology and mass communication where it is related to all the activities of processing, manipulating, managing, transferring information between media. The results of Lia's research, namely video streaming technology that is utilized in LPP TVRI West Java, greatly affects both TV stations and the public. With LPP TVRI West Java can compete with regional and national TV stations in the use of video streaming technology, especially LPP TVRI is the first TV station to utilize video streaming technology and LPP TVRI West Java is in it, whereas for video streaming technology community is very helpful in the needs the public will be information and entertainment, the public can easily and practically watch TVRI West Java LPP programs through gadgets wherever and whenever.⁹

Advantages of video streaming technology that is utilized in LPP TVRI West Java is that the network chooses separately, especially in video streaming so that there are no network constraints, missed programs can be watched again by selecting TV catchup contained in the live streaming TVRI application. The drawbacks of LPP TVRI West Java's live streaming: LPP TVRI West Java's live streaming programs can be watched starting at 15.00 on the Kalawarta program until 21.00 on the music program. For YouTube when selecting LPP TVRI West Java programs that appear is the National TVRI live program, because LPP TVRI West Java's live streaming starts at 3:00 PM LPRI TVRI West Java program titles available on youtube when selected are still empty, so users must type the program desirable in the search engine. The obstacle faced by LPP TVRI West Java in video streaming is the Internet network used by users.¹⁰

Furthermore, Irfan has carried out the other research in 2017, with the headline "Analysis of the Application of Internet Television as a Digital Information Dissemination Media for Regional Development (Case Study of the Communication, Information, Archive and Regional Code of Kotabaru District)". This study discusses the readiness of the application of Internet television to optimize the dissemination of regional development information. In terms of the Regional Government especially those, which have a fairly large area and consist of islands, the existence of Internet television provides an opportunity to be able to disseminate information on regional development effectively and efficiently. This is related to the increasingly widespread use of gadgets that can access the Internet quickly, in addition to the support of the BTS (Base Transceiver Station) infrastructure that has entered into remote villages. Therefore in this study, it will be seen the readiness of the Regional Government (Kotabaru Regency) in implementing internet television technology using a quantitative approach through the distribution of questionnaires to Employees of the Kotabaru district's communications, information, archives, and regional code. In this study, an index of readiness for the communication, information, archives and Kotabaru regency was produced in terms of readiness to apply Internet television technology to optimize the dissemination of regional

⁷ (Littlejohn, S. W. (2009). *Teori komunikasi, theories of human communication, edisi 9. Terjemahan Mohammad Yusuf Hamdan. Jakarta: Salemba Humanika, n.d.*)

⁸ (McQuail, D. (2011). *Teori komunikasi massa, Edisi 6. Terjemahan Putri Iva Izzati. Jakarta: Salemba Humanika, n.d.*)

⁹ (Kurniawati, 2019)

¹⁰ (Kurniawati, 2019)

development information.¹¹

In other references, as stated by Elhussein (2016), Tagging systems design is often neglected despite the fact that most system designers agree on the importance of tagging. They are viewed as part of a larger system which receives most of the attention. There is no agreed method when it comes to either analyzing existing tagging systems or designing new ones. There is a need to establish a well-structured design process that can be followed to create tagging systems with a purpose. This chapter uses practical inquiry methodology to generate a general framework that can be applied to analyze tagging systems and proceeds to suggest a design process that can be followed to create new tagging systems. Existing user behavior while tagging is the main guide for the methodology. User-centric approach in information system tries to discover how users' behavior is affected by the design of the system. With users in mind, user-centric design tailors how the information system is constructed according to the user group that is expected to interact with the system. This chapter introduces the concept with social tagging by following a methodology that is focused on providing solutions to specific problems. After a solution is found, the methodology suggest ways to expand it to similar problems within the domain. The conclusion of this research is Better understanding of the effect tagging components have over tagging behavior was achieved through FATS. Although this is useful, it is sometimes hard to explain tagging behavior coming from multiple tagging interface e.g Flickr taggers provide tags from the web-based system and/or the mobile based system.¹²

Research and Metodology

The research method in this article uses an interpretive paradigm with a case study approach. Data collection techniques using observation, in-depth interviews, and online search. Sources of data in this study are from various sides. Among them are the Chairperson of Suska TV Crew, Suska TV Master Control Room (MCR) Coordinator, Suska TV Users / viewers, and Community Television Observers. In selecting this informant the researcher used a purposive technique in which the researcher chose people who were considered to know clearly the problem under study. Sources of data in this study are from various sides. Among them are the Chairperson of Suska TV Crew, Suska TV Master Control Room (MCR) Coordinator, Suska TV Users / viewers, and Community Television Observers. In this study, researchers also used the method of triangulation with data sources.

Case study research is generally a study that has been produced from many sources. This research uses data collection techniques such as in-depth interviews, observation and document study. Stake in Creswell states that case studies are research that will explain an inquiry strategy where researchers explore in depth a program, event, activity, process or one or more individuals.¹³ Creswell suggests several characteristics of a case study, namely: (1) identifying the "case" for a study; (2) The case is a "system bound" by time and place; (3) Case studies use various sources of information in gathering data to provide a detailed and in-depth description of the response of an event and (4) Using a case study approach, researchers will "spend time" in describing the context or setting for a case.¹⁴

Meanwhile, according to Patton in Pawito see that the case study is an attempt to collect and then organize and analyze data about certain cases regarding issues of concern to researchers and then the data is compared or linked with one another while still holding on to holistic and contextual

¹¹ (Irfan, 2017)

¹² (Saeed, S., Bamarouf, Y.A. and Ramayah, T. eds., 2017. Design solutions for user-centric information systems. Hershey: IGI Global., n.d.)

¹³ (Julianna Davidson, "John W. Creswell Research Design Qualitative, Quantitative, and Mixed Methods Approaches SAGE Publications, Inc (2009)," n.d.)

¹⁴ (John W. Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Tradition.* (London: SAGE Publications, 1998), hlm.61-62, n.d.)

principles.¹⁵

Asmussen and Creswell displays data collection through a matrix of information resources for the for its reader. This matrix contains four types data; interviews, observations, document and audio-visual material for the column and specific form of information such as students, administration for classfields. submission of data through this matrix is intended to see the depth and many forms of data collection, so it shows complexity form the case. The use of a matrix will be usefull if ap[plied in an information rich case study. Cresswell further revealed that interviews and observation are data collections tools which is widely used by various studies. This shows that both tools are central to all the traditions of qualitative research so requires additional attention from researchers.¹⁶

Results and Discussion

In the case study perspective approach, the use of internet-based live streaming video as an alternative communication medium of Suska TV is often referred to as having many integrated factors. There are factors that can be supporting and there are factors that might hamper production. Suska TV programs that are broadcast to community viewers, especially the UIN Suska Riau academic community at the same time as the original event, through internet-based Virtual mixer (Vmix) media make communication data connected.

The digitalization opportunity utilized by Suska TV is broadcasting its shows through the "Suska TV Official" Youtube account has been carried out for more than a year. From an online search and researcher interview with the chairman of the Suska TV crew for the 2017-2018 period, Ibnu said that SUSKA TV conducted the first live streaming broadcast on January 10, 2019, at the Judicial event organized by the Da'wah and Communication Faculty of UIN Suska Riau at the Premiere Hotel in Pekanbaru. Since then, almost every time there is a big event held on campus, for example, flag ceremonies, seminars, commemorative holidays, etc., SUSKA TV broadcasts live streaming on Suska TV Official's Youtube account and also through the Instagram platform.

"Suska TV has a virtual video mixer around the end of 2018 if I'm not mistaken. We order through the custom procurement team from Solo and fix the first live streaming broadcast on the official Suska TV on January 10, 2019 to coincide with the Faculty Judicial event at the Premiere hotel. "(Interview on 29 Jan 2020)



Picture 2: Virtual Mixer Pro 17 Suska TV

¹⁵ (Vebrynda et al., 2017)

¹⁶ (John W.Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Tradition.* (London: SAGE Publications, 1998),hlm.61-62, n.d.)

In the production process of SUSKA TV's live streaming broadcast via YouTube channel, it is not much different from the satellite system on analog TV, both go through the process of selecting images that will air on the control room or better known as the Master Control Room (MCR). SUSKA TV also has a crew (MCR) working in the broadcast control room. SUSKA TV's MCR Coordinator will be responsible for controlling all live streaming programs. SUSKA TV's MCR coordinator, Fikrul Irsyad, said that the virtual mixer used was indeed intended for live streaming anywhere. It doesn't have to be in SUSKA TV's studio, because the shape is portable so it's practically taken anywhere to help the production process.

"So indeed, since Suska TV, which is a campus TV, has a virtual mixer, our production process has been greatly helped, especially if we are having an important event outside of campus. So, this Vmix is portable so you can carry it anywhere. Practical." (Interview on 4 Feb 2020)



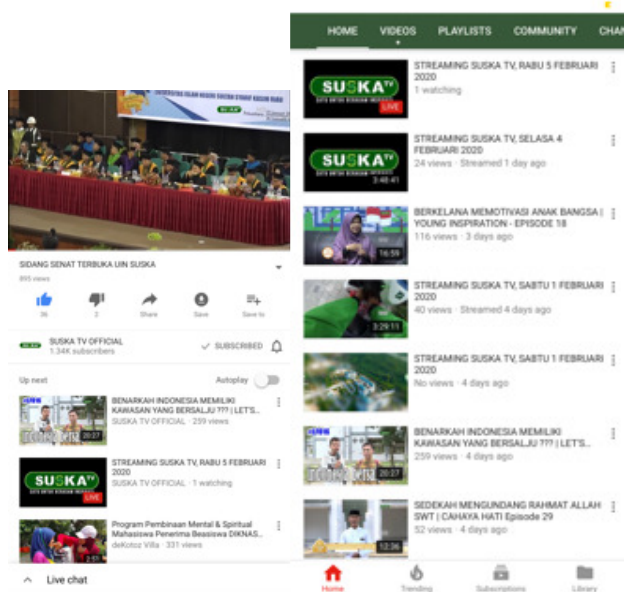
Picture 3: The crew personnel while using The Virtual Mixer Outside The Studio

Meanwhile, how to work a virtual mixer (Vmix) can be said to be simple. Fikrul said that the principle works through the transfer of images directly from the camera to Vmix using certain software. Fikrul Irsyad, MCR Coordinator Suska TV said;

"The way Vmix works is quite simple. The captured image is transferred via SDI cable to Vmix. Then, Vmix software will display a real-time Multicam of what is captured by the camera, there are several views in the Vmix software, including, 1 preview view, 1 program view or image which is on air, and some camera angle display all connected to Vmix and audio which enter Vmix through the audio port." (Interview on 4 Feb 2020).

Meanwhile, from the viewer / user / users of Suska TV, one of the student informants, Aisyah expressed her appreciation to the research team. He said that since Suska TV has live streaming technology, many campus academicians have benefited greatly. For instance, during the graduation occasion on grounds. Suska TV broadcasts helped her family to watch the procession when Ayesha joined the graduation ceremony.

"So yeah, this is another trend everywhere, live streaming broadcasts, moreover I'm proud that my campus can also participate in live streaming of graduation processions, so it benefits large families of students who are going to graduation because, no need to bother coming to the PKM building, it's full and crowded. You can just watch Suska TV on the graduation program." (Interview on 5 Feb 2020)



Picture 4: Live Streaming Scenes on The Graduation Event

On the other hand, Hisam Setiawan, deputy chairman of the Riau Regional Indonesian Broadcasting Commission (KPID) as a community television observer stated that until the beginning of 2020 there was still a moratorium on Broadcasting Operations Licenses by the Ministry of Communication and Information Technology (Kominfo). Hisam said that at this time in Pekanbaru, in particular, there was not a single community TV that could broadcast analogs via terrestrial.

"Since its establishment, SUSKA TV should have been running a broadcast trial for 1 (one) year, and after that, it would obtain permanent permission for analog broadcasts. However, due to constraints on the moratorium from the Minister of Communication and Information of the Republic of Indonesia which issued Circular Letter Number 1 of 2017 concerning the Moratorium on New Applications for Analogous Television Broadcasting Services for Terrestrial Broadcasting Services since February 6, 2017. This is valid for an undetermined deadline. However, this does not apply to applications for new licenses and expansion of broadcast coverage in Disadvantaged, Frontier and Outermost (3T) areas. Well, for borders, you can, but, for TV campus communities like SUSKA TV, you have to be patient." (Interview on 3 Feb 2020).

However, the enactment of the community TV broadcasting moratorium until now has not broken SUSKA TV's enthusiasm as a campus TV to continue producing through digitizing broadcasting. This is in line with what was written by Putri Adenia, regarding "Campus Television: Enlighteners Without Regulation". Campus media, including campus television, are identified as part of community media with limited reach. But the development of technology and the world of the Internet, it is appropriate that the understanding and regulation of community media be reviewed. Because of the Internet platform, making the campus media reach broad and has the same opportunities as the mainstream mass media. Even campus television has the opportunity to become an alternative TV for the community when the condition of the mainstream-broadcasting world is currently controlled by a handful of people. Seeing this opportunity, AJI Indonesia supported the implementation of TELEVISIONAIR organized by UMN TV, television campus of the Multimedia Nusantara University.¹⁷

¹⁷ ("Televisi Kampus," n.d.)

According to Euis, Technician of Suka TV at UIN Sunan Kalijaga, they have been using live streaming technology using an analog system since 2015, and then in 2019 began using Internet-based Black Magic technology. According to him the use of internet-based live streaming technology has advantages and disadvantages.

"The advantages related to an unlimited target audience, internet-based live streaming systems could also be recorded and watched multiple times after live broadcasting. But, the drawback is that the network must be stable, then for off-campus production, we must always refill Internet data packages." (Interview on 5 Feb 2020)

Besides, concerning the use of Youtube and Instagram platforms in broadcasting Suska TV, this has its advantages. In the article it is mentioned that the use of various platforms to support broadcast programs is very useful, in addition to free, good management will make the target to be achieved will be easier. From various media platforms used, such as conventional television, TV streaming, netcj.co.id website, Net CJ applications, Twitter, Facebook, Path, Instagram, Google Hangout and YouTube have different functions. The merging of various media platforms is known as convergence.¹⁸

Conclusion

It can be concluded based on observations and in-depth interviews, then found 2 factors supporting and inhibiting the use of live streaming video using the internet network at Suska TV. Supporting factors include, first, can produce live shows anywhere. Production of news broadcasts, campus programs, and events does not have to be done in Suska TV studios. Second, Following communication technology trends. Through a Youtube account, it gives freedom for the campus community to choose to watch the shows they want from their respective gadgets and then freely watch Suska TV shows again. While the inhibiting factors include, Bandwidth in the campus of UIN Suska Riau, which still needs to be increased. This is needed so that the quality of the broadcast is maintained and is not constrained by delay. Second, the qualification of live streaming technology that is used must always follow existing developments. This requires a lot of costs and Human Resources (HR) so that Suska TV can still be active in producing through digitizing broadcasting. This research is expected to be one of the references in the next research regarding the same theme of broadcasting digitalization, new internet-based media, campus community television, and so on.

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¹⁸ (Vebrynda et al., 2017)

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