

IMPLEMENTATION OF INFORMATION TECHNOLOGY IN SCHOOL ADMINISTRATION MANAGEMENT: A CASE STUDY AT REGINA PACIS BAJAWA PRIVATE HIGH SCHOOL

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ABSTRACT

This research aim to develop theoretical prepositions the implementation of information technology in school administration, focusing on a case study at the Regina Pacis Bajawa Private High School. The study employs a qualitative research approach, specifically using a case study method, to explore, explain, and describe the implementation of information systems in school administration. The research emphasizes the importance of technology in improving the quality of education and the efficiency of administrative processes. It delves into the vision and mission of the school, the use of various technology-based applications and websites, and the indicators for achieving effective school management. The implementation of information technology in school administration, specifically at Regina Pacis Bajawa Private High School, has positively impacted the delivery of information, ensuring speed, accuracy, and quality. Despite challenges in implementing management information systems, the commitment to enhancing educational services and teachers' utilization of technology remains high. The importance of information technology in education is increasingly evident, emphasizing the need for ongoing optimization of management information systems. This research highlights the crucial role of structured learning information systems and effective management systems in improving education quality. It stresses the involvement of all stakeholders, particularly school principals and teachers, in successful curriculum implementation. Overall, the implementation of information technology has significantly improved educational services, and continuous efforts are essential to enhance management information systems for high-quality education.

KEYWORDS

Information Technology, School Administration, Structure Learning Information, SMAS Regina Pacis Bajawa



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INTRODUCTION

Law of the Republic of Indonesia Number 20 of 2003 regulates the National Education System with the context affirmation that national education serves to develop the ability and shape the character and civilization of a dignified nation in order to educate the nation's life. Along with the dynamization of technology, efforts to develop educational regulations involve information and communication technology which functions as a means of correspondence between academic parties to achieve improvement and effectiveness of school performance. (Simamora & Wahyuningsih, 2019). Regulation of the Minister of Religious Affairs of the Republic of Indonesia Number 43 of 2016 concerning Education and Training Management Information Systems at the Ministry of Religion states that in order to improve the management of education implementation, it is necessary to implement an information and communication technology-based education management information system that integrates the process of planning, organizing, evaluating and documenting information and communication-based education and training activities.

The importance of information technology in school administration management is significant in improving the efficiency, accuracy and quality of education services. Various studies highlight this, such as the implementation of ICT-based school administration information systems to improve teacher quality and school administration governance. (Eka Putra et al., 2021). Information technology plays an important role in school administrative personnel services, such as correspondence, filing, and finance, with a focus on physical aspects, reliability and responsiveness. (Triana et al., 2021). The adoption of educational innovations using digital resources is expected to ignite the development of school students as agents of change and improve student learning. (Suripno & Gafur, 2015)..

The application of information technology in the management of Regina Pacis Bajawa High School, Ngada Regency, East Nusa Tenggara as part of the development of educational facilities shows an increased awareness of the importance of computer systems. Computer systems are becoming a vital alternative in overcoming various problems, especially along with the advancement of information technology today. SMAS Regina Pacis Bajawa, as an educational institution, recognizes the need to implement a computer-based system to manage school administration, ranging from student and teacher data to correspondence, with the aim of improving the quality of educational services and the ability of teachers to utilize information technology in the teaching and learning process.

An information system is a framework or work procedure for coordinating resources that process inputs into outputs to achieve organizational goals. (Muslihudin & Oktafianto, 2020). SIM is a computer-based system that provides information for users with the same background needs or goals, and can be used by management as a basis for decision making to achieve organizational goals (Suri & Puspaningrum, 2020; Sonia, 2022). School SIM is an innovation in education management by utilizing information technology to transform physical administration into electronic administration. It is expected that the implementation of school SIM

can improve the problems of management data collection that occur, improve the process of human resource development, and support all work related to information processing and management in the world of education.

The internal control of management model in educational institutions involves the utilization of human resources, documents, technology, and procedures by management to solve business problems. SIM is considered an integrated institutional part to present information to support operations, management, and decision-making functions in the organization. (Nazri et al., 2023).. The presentation of information in the form of a management model or database is used as a support for management operations and decision making in the organization, as well as providing sophisticated and fast information to all parts to manage an organization to stay in existence. (Triana et al., 2021).

The application of information technology in the management of Regina Pacis Bajawa Senior High School, Ngada Regency, East Nusa Tenggara as an effort to develop educational facilities is a form of increasing awareness of the importance of computer systems. Computer systems are an important alternative in overcoming various problems faced, especially along with the development of information technology that is increasingly advanced today. SMAS Regina Pacis Bajawa as an educational institution that plays a role in handling educational issues, feels the need to implement a computer-based system in managing school administration. Starting from the management of student and teacher data to correspondence, this aims to improve the quality of educational services and improve the ability of teachers to utilize information technology in the teaching and learning process.

Regina Pacis Bajawa High School is a private foundation that has been registered in the main data of the Ministry of Education and Culture since 1982. The number of each grade level in Class X, XI and XII is 417, 377 and 384 students respectively. As for the teachers at this institution, there are 9 teachers with ASN status, 48 honorary teachers, 5 administrative staff and one person as library staff. The imbalance of the number of educators to the number of students is an important factor considering the acceleration of the school accreditation process with the school institution as an integral part of the digital documentation system, the process of collecting and analyzing the data needed for accreditation can be done efficiently. the influence of institutional transparency and accountability can help in building trust and reputation of SMAS Regina Pacis Bajawa. This research discusses the use of information technology for school management at SMAS Regina Pacis Bajawa by reviewing aspects of computer-based administration, grade information systems and the dissemination of learning materials and assignments for students through school digitization.

RESEARCH METHOD

The research approach used in this study is a *qualitative research* approach by looking at the real conditions on the object under study without intervening and directed at the individual setting holistically. This research is specifically more directed at using the case study method through exploratory, explanatory and descriptive study designs. (Lune & Berg, 2017).

Data collection techniques in this study can be done through: 1) Observation, making systematic observations of the phenomenon of the implementation of information system technology at SMAS Regina Pacis Bajawa, 2) Interviews with teachers and principals to understand the current system at school, school history, the level of SIM involvement in school administration, 3) Data documentation in the form of primary and secondary data. Primary data was obtained by studying the database and the results of interviews with relevant parties of SMAS Regina Pacis Bajawa to collect facts about the current system and system needs. Meanwhile, secondary data collection through literature study includes everything that is theoretical to support the discussion of the utilization of information technology in administrative and academic management of students.

Data processing and analysis used an *interactive model of analysis* based on the theory of Miles & Huberman (Bungin, 2007), adjusted to the research limitations with the aim of answering the existing problems. After the data is processed, it is expected to find an ideal solution for the utilization of information technology in school administration management.

RESULT AND DISCUSSION

As an educational institution that has the duty and responsibility to develop and educate the nation's life, educate quality children and be responsive to advances in information technology, SMAS Regina Pacis Bajawa has a vision "the realization of independent humans who have multiple intelligences based on Catholic faith". Meanwhile, the mission of organizing learning and education is described as follows:

- a. Organizing teaching and learning activities in a professional manner
- b. Creating a school atmosphere as a community of faith that is solidary, democratic and has a high work ethic.
- c. Fostering a spirit of excellence for the entire education community
- d. Improving appreciation of arts, culture, sports and skills
- e. Increase participation of parents, community and alumni
- f. Build networks and cooperation with government, churches, NGOs and other institutions.

According to Mr. Hendrianto as the Principal, the flow of implementing administrative management at school is based on two things, namely information system planning and HR management placement in each position. The process of implementing administrative activities is divided into several parts, namely, 1) student administration through extracurricular assistance and student activities for the development of student talents and achievements; 2) curriculum administration which is guided by the independent curriculum and K13; 3) infrastructure administration which includes the procurement of necessary units or goods and maintenance; 4) public relations administration includes establishing communication between the institution and parties who collaborate with the institution; 5) R & D and spirituality administration includes assisting students in developing students' spiritual intelligence and; 6) information technology administration includes developing the learning process through online and matters related to school informatics management. One of the management information system planning in improving administrative

services at SMAS Regina Pacis Bajawa is to provide facilities to support the information system and the convenience of administrative activities with the following details:

Table 1. Data on Facilities Supporting Administrative Activities of SMAS Regina Pacis Bajawa

No.	Description	Quantity (Unit)	Item Condition		
			Good	Lightly Damaged	Severely Damaged
1	PC/Computer	4	4	-	-
2	Laptop	36	36	-	-
3	Printer	7	7	-	-
4	Projector	20	20	-	-
6	AC	1	1	-	-

The implementation of school administration information technology by optimizing program preparation by formulating objectives in management information system services and determining targets in information system services is in accordance with the explanation of Mr. Hendrianto as Principal of SMAS Regina Pacis Bajawa, which is detailed as follows:

Table 2: Work Outcome Indicators for Administrative Management of Regina Pacis Bajawa Senior High School

Activities	Outcome Indicator		Implementation
	Base Line	Target	
ICT extension as a learning tool	Teachers' level of knowledge about ICT as a learning tool (40%)	Teachers' level of knowledge about ICT as a learning tool (95%)	1) Counseling with lecture and discussion methods 2) Mentoring the teaching process using Ms. Office
Design a school administration application system	The level of participation of educators and staff in the use of school administration applications (50%)	The level of participation of educators and staff in the use of school administration applications (100%)	1) Optimization of the school website, social media and online community for guardians
Program socialization and mentoring	Capability of using educators in running each administration program (50%)	Capability of using educators in running each administration program (80%)	1) Training on the use of learning applications (E-Assessment, Jotform, GCR, Edmodo, E-Raport) 2) The use of virtual school payment accounts in

			collaboration with BRI and Bank NTT.
Final evaluation of materials and audit of information management systems	Progress in educators' and staff's understanding of databases and the use of school administration program tools (40%)	Progress in educators' and staff's understanding of databases and the use of school administration program tools (90%)	1) Financial audit with the foundation through annual committee meetings 2) Teacher competency development and self-evaluation through PMM and Workshop activities
Periodic monitoring for continued administrative efficiency	Educators and staff's willingness to use the application (50%)	Educators and staff's willingness to use the application (80%)	Monthly updates and evaluations on management system updates and related applications

The existence of this goal is an effort to achieve the goals that have been formulated by mobilizing all elements ranging from educators, education personnel, staff, students, student guardians and those in the SMAS Regina Pacis Bajawa environment to create good synergy to effectively achieve the school's vision and mission.

Based on observations, the implementation of information systems in the administrative activities of SMAS Regina Pacis Bajawa is also carried out by determining the use of supporting applications based on management functions, including *planning, organizing, leading/actuating* and *controlling*. Management information systems in educational institutions provide convenience in providing information quickly, accurately and comfortably so that it becomes a competitive advantage. One of the online and *real time* education data management and data collection systems realized by SMAS Regina Pacis Bajawa is the Dapodik application. There are main types of data managed in the Dapodik system, including school data, student data, certification of school establishment and operations, data on educators, educational employees, staff and the institutional hierarchical structure of SMAS Regina Pacis Bajawa. The role of the principal in managing Dapodik is to be responsible for determining the direction of an institution or *top leader* by designing and fulfilling aspects related to the interests and progress of resources in the school environment.

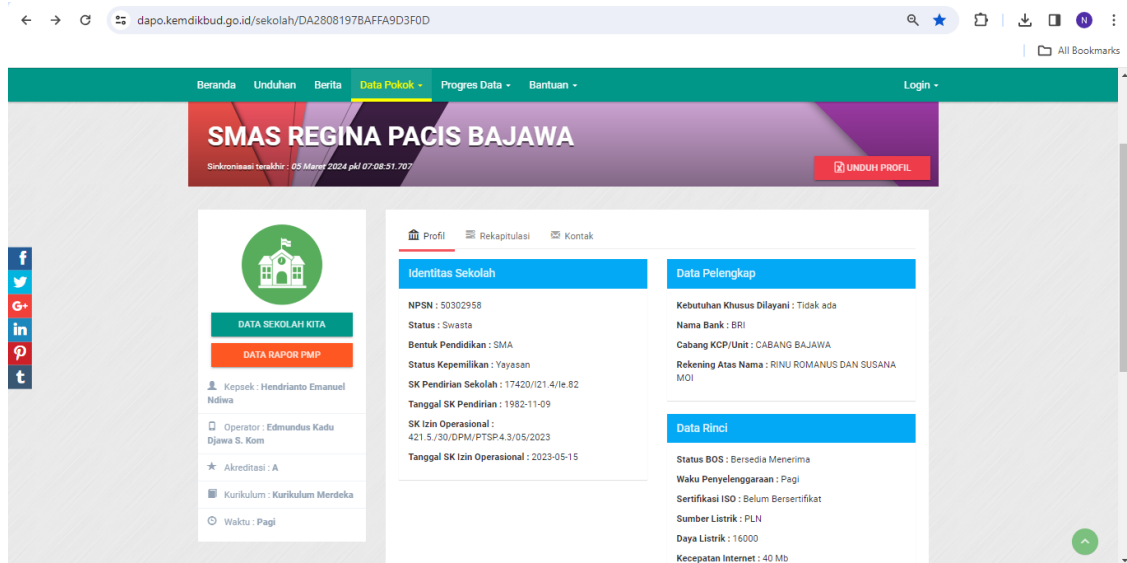


Figure 1: Home Page of Dapodik System of Regina Pacis Bajawa Senior High School

In addition, SIM technology services are also realized for students by optimizing the use of internet or wifi networks to support students' learning flexibility. Currently, the management of SMASS Regina Pacis Bajawa has a website profile home page through the wordpress domain but has not optimized its use to integrate the various needs of educators in a *one gate system* which will facilitate the availability of cumulative information to support planning and decision making for school interests and provide added value to the school profile so that it can increase competitiveness better.

Personnel Management

Based on the results of interviews with the Principal and Head of Administration of SMASS Regina Pacis Bajawa, which is one of the largest schools in Ngada Regency, East Nusa Tenggara, which has 63 institutional staff including teachers, information was obtained that the processing of staffing information has been computerized, where data regarding staffing is already in the *Microsoft Access* program. Personnel data processing is carried out in real time by utilizing an internet connection with continuous data processing where data processors must follow and update data in accordance with agency developments.

The implementation of personnel administration matters is carried out by administrative staff starting from attendance including leave, analyzing employee needs, taking care of employee rank, employee salaries, employee pensions and making personnel master books from the registration process to archives that are accumulated in the personnel database. To determine the development and performance of each employee, SMASS Regina Pacis Bajawa implements a KPI (*Key Performance Indicator*) design information management system, which is a measure that will provide information on the extent of success in realizing information compared to the strategic goals that have been set. (Suaidah & Sidni, 2018). The

following is the flow of employee indicator assessment at SMASS Regina Pacis Bajawa;

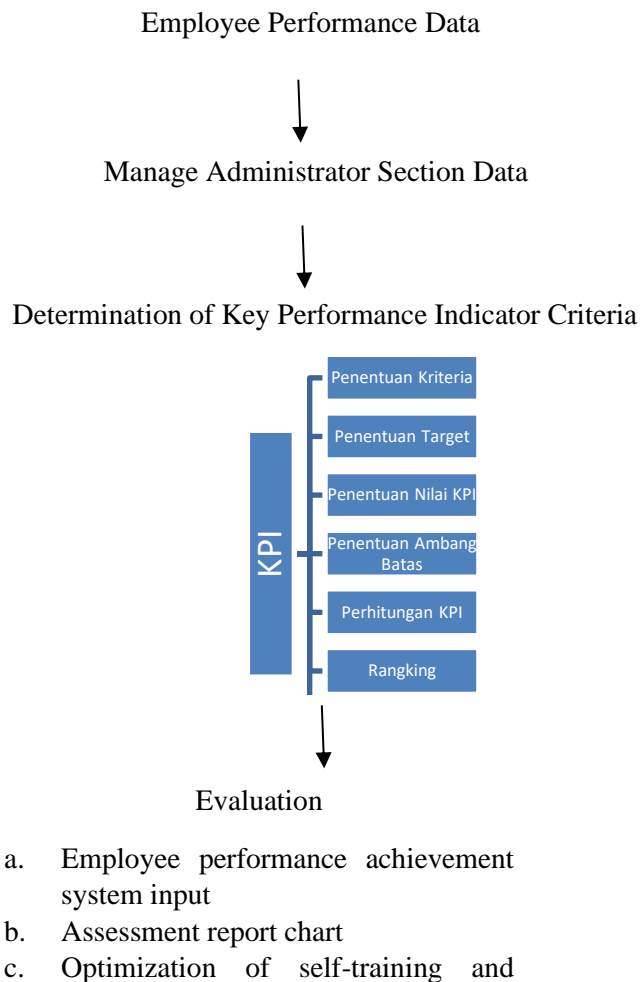


Figure 2. Flow of data processing and staff performance assessment at SMASS Regina Pacis Bajawa

Employee evaluation carried out at SMASS Regina Pacis Bajawa aims to prepare educators who are capable of realizing teaching and learning activities and educating the nation's children. The organization of training conducted by senior educators and official parties to improve employee skills, motivate employee morale and prepare for employee promotion.

Coordination and communication between employees play an important role in maintaining smooth and effective work. This process can be done through various activities that have been prepared by the organization, both directly and indirectly. One example of direct activities is through face-to-face communication, while the WhatsApp application can be an effective communication tool to coordinate indirectly. In addition, some schools also organize employee sports activities, such as playing badminton together, as a means to establish closer relationships

between employees. Coordination is considered an important step in reminding and directing employees in carrying out their duties. Therefore, organizations need to hold regular coordination activities to ensure that each part can run according to its duties and responsibilities. These coordination activities can be done at the beginning of the school year, every three months (quarterly) with coaching, monitoring, and reporting, and every month through briefings and reporting led by Mrs. Itjeh Kodijah, Mr. Sudayat and Professor Drs. Concilianus Laos Mbata from the driving teacher section.

In addition to coordination, performance appraisal and employee ethics are also important in maintaining the quality and morality of the organization. This assessment is usually carried out periodically every week by the principal and reported monthly to the relevant office or foundation. Currently, the assessment has been facilitated by an online system through the SKP application, which allows employees to more easily and quickly monitor and improve their performance. A good organization should be able to maintain and strengthen employee morality and discipline. Therefore, performance appraisal also covers the ethical aspects of employees, which will be the basis for the development and maintenance of the desired professional attitude. By using an online system through the SKP application, performance appraisals can be carried out more efficiently and structured, making it easier for employees to understand and improve their performance in accordance with the standards set by the organization. (Hanafi, 2019).

Student Management

Student management information systems in schools provide a number of significant benefits to students, especially in terms of biodata management. In this system, students' complete biodata can be accessed by the school, and if there are errors in the data, students can edit it directly without having to report themselves to the school. However, the implementation of this system cannot be fully carried out because there are still limitations, especially in terms of connectivity. SMAS Regina Pacis Bajawa, for example, still uses an offline information system that cannot be accessed by students.

One important aspect of SIM technology implementation, including hardware, software and student databases. These components are an integral part of the information system that enables efficient and effective management. In addition, in the context of curriculum management, the role of curriculum is crucial in improving the quality of education in schools.

Learning management at SMAS Regina Pacis Bajawa is structured and systematic. Before implementing learning activities, the principal and his staff carry out management related to determining the curriculum, developing a learning system, and distributing tasks or teaching hours to teachers. In addition, curriculum planning and design are adjusted to the curriculum set by the Ministry of Education and Culture (MoEC). Before implementing curriculum changes, the principal and his staff always hold discussion meetings to compile the tools that will be determined in the curriculum. SMAS Regina Pacis Bajawa also dares to implement the independent curriculum independently, so that all preparations related to learning tools in the independent curriculum are prepared and adjusted to the conditions of

the school environment. Furthermore, the school constantly monitors the implementation of the curriculum, which includes evaluation and supervision of teachers. The results of student grades and teacher supervision data become a measure of the success of the learning that has been carried out, as well as material for reflection and evaluation of teacher teaching in the future. The following is a list of websites and applications supporting student learning activities at SMAS Regina Pacis Bajawa;

Table 3. List of Learning Apps/Websites Used at SMAS Regina Pacis Bajawa

App/Website Demonstration	Function	Effectiveness Level
E-Exam	A website-based CBT (<i>Computer Base Test</i>) exam support tool to assist the learning evaluation process, which can be accessed by users via www.e-ujian.com ((Kurniawan, 2022). This application is used by elements of SMAS Regina Pacis Bajawa to support semester exams and school exams as well as a means of socializing to student guardians about the schedule and implementation of student exams.	<ol style="list-style-type: none"> 1) Fast and reliable 2) Save cost and labor 3) Scores can be known automatically 4) System security and fraud prevention
Google Forms	Full-featured form tool available for free via <i>Google</i> account. It provides simple quiz templates and is easily accessible to all students of SMAS Regina Pacis Bajawa. <i>Google forms</i> are commonly used for daily assignments or remedial activities.	<ol style="list-style-type: none"> 1) Fast and reliable 2) Save cost and labor 3) Scores can be known automatically
Edmodo	An online learning platform provided for teachers, students, parents, and schools. Edmodo has several features that can be used in the learning process, including: note, assignment, <i>poll</i> , quiz, and library. (Nurhayati, 2021). The use at SMAS Pacis Bajawa as a means of measuring students' cognitive abilities, Midterm Exams and Daily Tests.	<ol style="list-style-type: none"> 1) Fast and reliable 2) Save cost and labor 3) Scores can be known automatically 4) Increase students' <i>vocabulary</i> 5) Work time limit can be set
Jotform	An online application that can be used for interactive formular creation and data collection. The use of jotform for students of SMAS Regina Pacis Bajawa includes: <ol style="list-style-type: none"> 1) Collection of assignments and homework 2) Delivery of assignments to teachers 	<ol style="list-style-type: none"> 1) Fast and reliable 2) Save cost and labor 3) Flexibly accessible

	3) Student learning data collection	
	4) Delivery of specific requests to teachers or education personnel	
GCR	GCR (<i>Google Classroom</i>) is an online learning platform developed by Google for schools that serves to provide teaching materials and materials online through Google Drive storage features, virtual communication between students and students and monitoring student learning activities.	1) Save cost and labor 2) Flexibly accessible 3) <i>Realtime monitoring</i>

Thus, the structured and systematic management of learning information systems and the effective use of management information systems are key in improving the quality of education in schools. The participation of all parties, especially principals and teachers, is indispensable in maintaining the smooth and successful implementation of the curriculum in schools.

Supporting and Hindering Factors of SIM Implementation

The implementation of an information system in an educational institution has a number of supporting and inhibiting factors that affect the effectiveness and efficiency of its use. SMAS Regina Pacis Bajawa is an interesting example to study, as there are various challenges and solutions related to the implementation of management information systems. One of the main supporting factors is the positive response from education customers, namely students and their parents. Their involvement and support for the school, as well as trust in the programs offered by the school, are key to success in implementing the information system. In addition, other supporting factors include the completeness of technological facilities and infrastructure, as well as the availability of human resources who are experts in operating information systems. (Sholechan, 2021).

However, on the other hand, there are also some inhibiting factors, such as limited internet access and the lack of involvement of student guardians in social media. Nevertheless, the school always tries to convey information to all parties, although sometimes with a slight delay. In this context, the role of homeroom teachers is very important, as they have a close relationship with students and their parents. The weaknesses of the management information system were analyzed by reviewing the existing problems, such as system performance, response time and the quality of information presented. Despite the challenges faced, the spirit to create a superior and religious generation is high at SMAS Regina Pacis Bajawa.

Measuring the success of management information systems is done by paying attention to the technical quality of the system and the quality of the information produced. Electronic media is very important in delivering information in this digital era, but print media also still has its role, especially in targeting certain educational customers. From the above, it can be concluded that despite the challenges in implementing the management information system at SMAS Regina Pacis Bajawa, the enthusiasm for delivering precise and quality information remains high among educators, education personnel and education customers.

CONCLUSION

From the above, it can be concluded that the implementation of information technology in school administration management, especially at Regina Pacis Bajawa Private Senior High School, has had a positive impact in delivering information quickly, accurately and with quality. Although there are challenges in the implementation of management information systems, the enthusiasm to improve the quality of education services and the ability of teachers to utilize information technology in the teaching and learning process remains high among educators, education personnel, and education customers. In this context, the importance of the application of information technology in education becomes clearer, and efforts to continuously optimize management information systems in schools need to continue. Thus, the implementation of information technology at SMAS Regina Pacis Bajawa makes a positive contribution to improving the efficiency, accuracy and quality of education services. The development of the administrative information system at SMAS Regina Pacis Bajawa needs to be further optimized by giving more commitment to control and the creation of a school-specific integrated website.

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