

Reservation and Quotation System on Travel Bureau Companies

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Abstract—Travel Bureau Companies sell various kinds of products from various suppliers, such as hotels, restaurants, transportation and so on. These products are packaged in a tour package and offered to tourists or bureaus abroad at a predetermined price. Not infrequently there are customers who want a tour package with a variety of product choices that are different from the package offered. Customers want to choose products and arrange them into tour packages according to their wishes, and know the price. The price of this tour package is determined based on the number of people, the country of origin of the guests and the time of service. After being sure of the choice and agreeing with the price set, customers can immediately order the tour package. Based on the order made, the company will then handle the order. This research is intended to develop a system that can be used to conduct tour package pricing according to customer choice and handling tour package orders by customers at tour and travel bureaus. The system was developed with an object-oriented methodology and uses the VB.Net 2012 programming language and MySQL as its database.

Keywords—systems, quotation, reservation, tour packages, travel bureau

I. INTRODUCTION

The rapid development of information technology has an impact on the ease of getting information. Any information in fast and easy can be found [1]. For companies, this will certainly increase competition and they are required to be able to provide fast and accurate services to their customers [2]. Besides that, the company must also be able to provide various products / services that are in accordance with the wishes of customers [3]. This condition is very evident in the world of tourism, especially for travel bureau companies. This travel bureau is a company that sells a variety of products such as hotels, restaurants, transport and so on which are packaged in various tour packages [4]. This tour package with a predetermined price is then offered to prospective buyers. Most travel bureaus set tour packages according to market demand, while there are travel bureaus that do not have their own tour packages, and are mainly dependent on tourists [5].

Before the ease of obtaining information, especially a variety of information related to existing tourist destinations, products or tourist attractions, tourists tend to choose and agree with the tour packages offered by travel bureau companies [6]. On the contrary, there is now a tendency for tourists to choose or determine their own service packages they want [7][8][9]. Of course the company still provides tour packages that can be chosen directly. In order for

customers to have the freedom to choose a variety of products and arrange them into tour packages, the company must offer a variety of products [10]. In addition to a variety of products, companies must also have the ability to perform fast and accurate pricing calculations [11, 12].

The price of a tour package offered by a company is usually based on the price contract from the supplier and is then marked up [13]. Another thing that can affect prices is the service time factor that is associated with high / low season time, the country of origin of customers and the number of people in the group [14, 15]. The pricing of this tour package is actually relatively easy, because it has standard rules and conditions. The problem lies only in precision and accuracy, especially with regard to diverse product combinations in the preparation of tour packages and a large variety of products [16]. Because of the nature of routine and standard work, the use of information systems for pricing tour packages will be able to overcome this problem [17].

Customers who have chosen a tour package option and agree to the price, will immediately place an order with the travel bureau company that offers it. Based on orders received by this tour package, the company will carry out its service process. This service process needs to be carefully prepared, because it relates to other parties, such as suppliers and guides. To support and facilitate the handling, it is necessary to develop and integrate a pricing system and tour package ordering system [18, 19]. This research was conducted to produce an information system that integrates the process of preparing and pricing tour packages carried out by customers with the process of recording and handling orders made by the company. The existence of an integrated system is believed to be able to increase the speed of service of the company, and automatically will also increase the company's competitiveness [20, 21].

II. LITERATURE REVIEW

The quality of the relationship between customers and travel bureau companies is very much influenced by customer experience. The key factors that have a positive impact on the quality of relationships directly are the dimensions of THINK and ACT. While the dimensions of FEEL and SENSE have an impact on online relations [22]. The negative perception caused by customer mistrust, qualified companies, negative mass media coverage and failure to attract new customers is a very serious threat to travel bureau companies. This very subjective perception is very different according to culture and time of occurrence. This dynamic perception will be experienced before the

purchase, at the time of purchase, after service and afterwards. The perception that is created is very closely related to (1) the functional value of the travel bureau (installation); (2) functional value of travel bureau contact personnel (professionalism); (3) functional value of purchased tour packages (quality); (4) the price of functional value; (5) emotional value; and (6) social values [23]. This perception can be countered by the use of Internet technology as a medium for disseminating information, developing new products and creating special markets [24]. Innovations that can be done by companies are implementing product, process, marketing and organizational packages that will have an impact on business models [25]. There is a significant relationship between service innovation and the operational sustainability of the company, and between organizational innovation and the number of personnel [26].

Various alternative strategies can be applied by travel bureau companies in the market with high Internet penetration [27]. The strategy of giving discounts turns out to be claimed not as the right choice. There are 2 (two) strategies that are believed to be able to make a travel bureau company survive, that is, if it focuses on specific services or focuses on certain market segments. Research shows that the use of travel bureaus is indeed related to specific services related to tour packages, transportation services, and destinations unknown to tourists. The findings of this study support the idea that the most promising future for travel bureaus will lie in specialization in the context of travel and travel components where other booking channels and the media may not be able to offer full replacement for travel bureau services [28]. Empirical findings indicate that tourist reviews have a significant impact on online sales, with a 10 percent increase in rating of traveler reviews increasing online bookings by more than five percent. The results highlight the importance of reviews made by online users for business performance in tourism [29].

III. RESEARCH METHODS

To produce a good and quality system, it will be carried out with a gradual and continuous process which is commonly called the Waterfall development method, with an object oriented approach [30, 31]. The process will be divided into 3 (three) stages, namely the stages of object-oriented analysis (OOA), object-oriented design (OOD) and object-oriented programming (OOP) [32, 33]. The process begins by identifying the system requirements that will be built, namely in the form of identifying information that must be generated and how the system works [34]. The results of this stage will be presented in several object-oriented models [35]. The results of this analysis are then used as the basis for designing object-oriented systems as well. In this design the components that will build the system and their interactions with others will be described [36, 37]. The results of these two stages will be presented in the form of several object-oriented models using UML (Unified Modeling Language) [38][39][40]. As a final stage, a system development will be carried out, namely writing the program by translating the system design using the programming language used [41][42][43]. The system will be built using the VB.Net 2012 programming language and MySQL as a data collection database from the system.

IV. RESULTS AND DISCUSSION

Four packages sold by travel bureau companies are a combination of various products obtained from bureaus / suppliers, such as tours, hotels, restaurants, transport and others at predetermined prices. This tour package offer is sometimes not in accordance with the wishes of customers. Some want special packages that are in accordance with their own wishes. For cases like this, the marketing staff will compile a new tour package, and calculate the price of the package. If approved, then the customer then orders the chosen tour package. This order is recorded by the reservation staff and follows up with the service preparation process.

There are 3 (three) factors that are taken into account in the price of a tour package, with a presentation level determined by the company. The three factors that affect the selling price of the tour package are the country of origin of the prospective buyer, the number of the person in the group and the period of time (session period). The level of presentation of national origin is adjusted to the target country / target market of the company. To increase the number of buyers, the number of person in the group are used as the basis for presentation level setting. As for the time of service associated with the holiday season or not. Services on the holiday season tend to be more expensive than normal days. Determination of the level of presentation related to these three factors can be changed and adjusted by the company, tailored to the needs and conditions that exist.

Orders made by the buyer will be recorded by the reservation section. This order was then followed up by the operational department in preparation for its service. This service preparation includes follow-up ordering products related to tour packages ordered by buyers to suppliers, preparation of service programs and other service preparation, including preparation of related documents.

The system to be built must be able to handle the 2 (two) activities mentioned above, namely the process of preparing and pricing tour packages in accordance with the wishes of prospective buyers, and handling the process of recording and handling tour package orders carried out by buyers. In preparing and pricing tour packages, prospective buyers just choose the product they want and see how much the product / package they choose. The system sets the price of the package in accordance with the applicable provisions in the company. Furthermore, if the arranged tourism package is agreed upon by prospective buyers, then the order is made into the ordering system. This tour package order is then followed up by the company's operational staff.

The above description is the result of the analysis phase in a system development. This result is referred to as system requirements. Furthermore, this system requirement can be described by a model. In object-oriented modeling using UML, the model of analysis results can be described in a use case diagram model. The results are shown in Fig. 1.

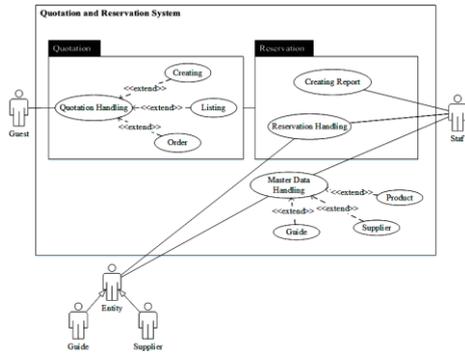


Fig. 1. Use case diagram.

As shown in Fig. 1, the system built is an integration of 2 (two) subsystems, namely Quotation and Reservation. The Quotation subsystem will specifically handle the preparation and pricing of tour packages carried out by prospective buyers. The Reservation subsystem will be used to handle orders that have been sent by the buyer, after making the preparation and pricing. This Reservation System will be operated by company staff. In addition to these two subsystems, the system is also equipped with master data handling facilities related to tour package price calculation and order handling.

The system will be operated by 2 (two) user groups, namely Guest and Staff. Guest users are prospective buyers who can make arrangements, pricing and booking tour packages. This Guest activity is fully related to the functionality of the Quotation subsystem. Staff users will operate the Reservation subsystem and handle data masters. The data handled is Product data offered to buyers, Supplier of each product and Guide assigned to accompany buyers during the service process. In handling master data, staff will deal with a lot of Suppliers and Guides.

To handle this overall needs, the system built will have 3 (three) main menu items, namely Quotations, Reservations, and Masters. The process and object interactions that occur in this system can be explained in the interaction model of the UML model, namely the Sequence Diagram model as shown in Fig. 2.

In Fig. 2 it appears that Guest can choose the Quotation menu. In this case Guest means activating the Quotation subsystem. What Guest can do is making tour packages and at the same time pricing, see a list of existing tour packages and order tour packages. This activity will be associated with available menus, namely the New, List and Order menu. Staff can choose the Master and Reservation menu. The Master menu is selected to manipulate Product, Supplier and Guide data, according to the menu. Data manipulation includes adding new data, modifying existing ones, or deleting data that is deemed not needed. The Reservation menu is chosen to handle orders made by Guest through the Quotation subsystem. The Reservation subsystem will retrieve data from the Quotation subsystem in the form of tour package orders, and Staff can display and make reports. This activity will also be associated with menu selection, namely List to display orders from Guest, Select to display one order and Report to make an order report.

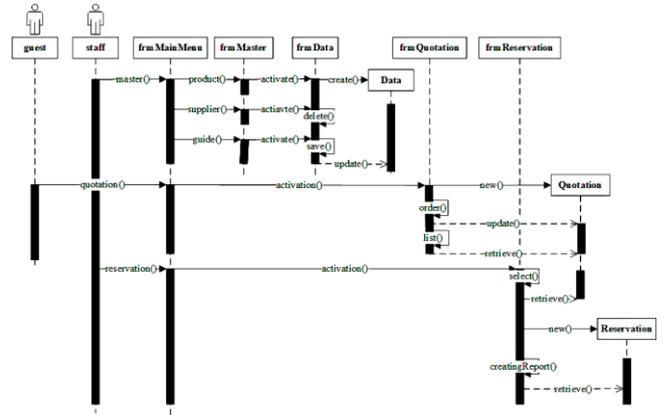


Fig. 2. Sequence diagram.

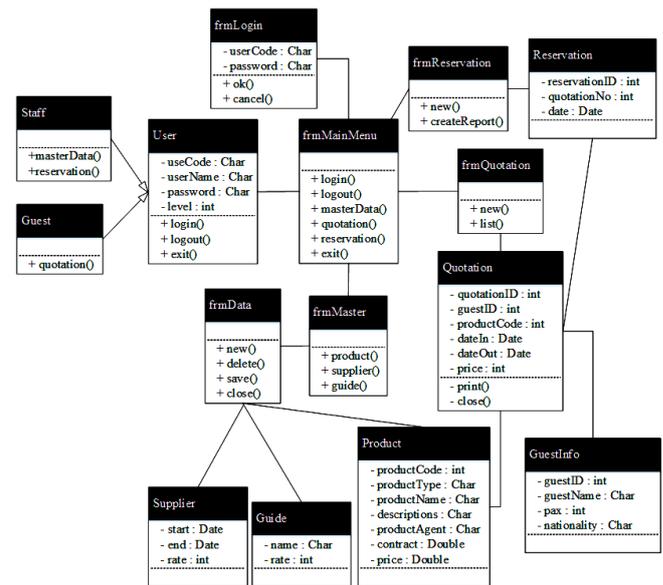


Fig. 3. Design class diagram.

Based on the description of the results of analysis and class identification of existing objects, a system design can then be arranged. The design of this system can be described in a Design Class Diagram, as shown in Fig. 3. The diagram presented shows the classes that are owned by the system and the interactions or relationships that occur between them, and are used as a basis in developing the program of the system. Each class will be translated into a class program or interface which is a component or architecture of the program, while the entity is translated into a data table to hold data.

The frmMainMenu class is the main driver and controller of all program components. This class provides various menus related to activities that will be and can be done by system users. Beginning with logging in, the user is required to fill in the user code and password, and will be verified and validated by the system to determine who and what the user can do. This process will be handled by the frmLogin class. The management of data from the system will be handled by the frmMaster and frmData classes, which are handled by the menu. The frmQuotation class is a component that handles the preparation and pricing of tour packages, while the frmReservation class serves to handle reservations. Other classes replicate data related to the operation of this system.

The results of this system design are then implemented into a system using the VB.Net 2012 programming language and MySQL for the database system.

When the system is operated, by default Guest will be activated as a user, with the consideration that the system will be more intended for potential buyers of tour packages. If the company staff operates it, then the user must fill in the user code and password. Based on the user category, the system will activate the menus provided according to the user category. For Guest, can only make a new quotation or see a list of existing quotations. Ordinary staff can record data, make quotations and reservations, but cannot manipulate existing data. For managers to run all the menus, including manipulating the data.

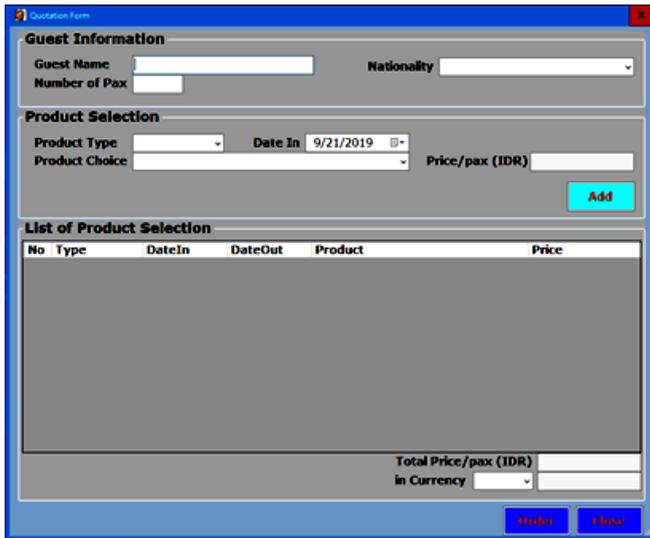


Fig. 4. Quotation form.

In making a new quotation, the system will display a screen similar to Fig.. 4. The user must fill in the prospective buyer data, which includes the guest name, country of origin and the number of people who will participate. This data must be filled in, because it is an important component in calculating the price of travel packages. Then the user selects and completes the data of the product to be purchased one by one, and adds it to the list by pressing the Add button. The system will automatically calculate and add up the price of the tour package created. When finished, the user can continue by pressing the Order or Close button. Pressing the Order button means placing an order for the tour package that has been arranged, while pressing the Close button to end the quotation creation. The order process will continue with the complete filling of the customer data, and proceed with the order delivery process. Both processes will have an impact on the recording of quotation data and will be displayed on the quotation list.

Reservation data that has been sent by Guest will be added to the reservation list, and can only be seen / manipulated by staff. To process reservation data, users must log in as staff. In the reservation list that is displayed, the user can make a new reservation, view reservation data, see service details on the reservation and print the reservation. This activity is carried out by pressing the New, Detail,

Service and Print buttons. Except for making a new reservation, the activity must start by selecting one of the reservation data in the list. To end the reservation data management, do so by pressing the Close button.

After selecting one of the reservation data in the list, staff can see the details of this reservation by pressing the Details button. Reservation details will be displayed as shown in Fig.. 5. Reservation service data are separated according to product types, namely Hotels, Itinerary, Transport and Guide. If needed, staff can manipulate (add, change and delete) the reservation service data, and add a list of participant names by clicking on the Name List tab and special notes by pressing the Remarks tab. When it is finished, it can be ended by pressing the Close button.

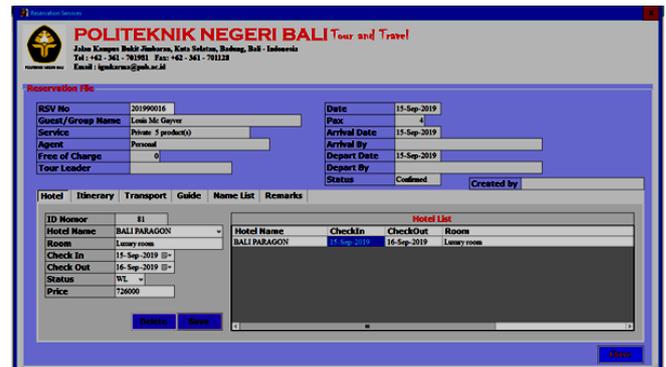


Fig. 5. Detail reservation services.

V. CONCLUSION

The system that is built is the integration of 2 (two) subsystems, namely the Quotation system that handles the preparation and pricing of tour packages and the Reservation subsystem that handles tour package orders. The Quotation subsystem allows prospective buyers to make their own tour packages according to the choice of products provided. Prospective buyers can immediately find out the price of the tour package they have arranged themselves, and if they agree, then the prospective buyer can immediately place an order. Orders made on this tour package were then followed up by staff by utilizing the Reservation subsystem. These two subsystems are related to one another.

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REFERENCES

[1] D. M. Frías, M. A. Rodríguez, and J. A. Castañeda, "Internet vs. travel agencies on pre-visit destination image formation: An information processing view," *Tour. Manag.*, 2008.
 [2] E. Díaz, D. Martín-Consuegra, and Á. Esteban, "Perceptions of service cannibalisation: The moderating effect of the type of travel agency," *Tour. Manag.*, 2015.

- [3] J. Wen and P. Hou, "Comparative study on travel agency management system in mainland China, Hong Kong and Taiwan," *Am. J. Ind. Bus. Manag.*, vol. 5, no. 01, p. 37, 2015.
- [4] I. G. M. Karma, "The accounting information systems of water sports company," in *The 3rd Bali International Seminar on Science and Technology*, 2015, p. D.39-D.46.
- [5] C. Ling, "A study on reasons and solutions to tour guides' ripping off tourist," *Am. J. Ind. Bus. Manag.*, vol. 4, no. 2, p. 90, 2014.
- [6] I. G. M. Karma, "The integrated reservation information systems of travel agency company," *Proceeding Tour. Indonesia*, pp. 24–27, 2014.
- [7] M. Krishnamurthy, D. Sudha, Y. N. Rao, R. Baskaran, and A. Kannan, "An effective and customized itinerary planning system using association rule mining technique with personalized points of interest," *Circuits Syst.*, vol. 7, no. 07, p. 1120, 2016.
- [8] Y. Qian, J. Hu, and M. Zhang, "Study on the online travel information search: A perspective of social media," *Adv. Appl. Sociol.*, vol. 5, no. 08, p. 219, 2015.
- [9] D. J. Kim, W. G. Kim, and J. S. Han, "A perceptual mapping of online travel agencies and preference attributes," *Tour. Manag.*, 2007.
- [10] U. S. Grisseemann and N. E. Stokburger-Sauer, "Customer co-creation of travel services: The role of company support and customer satisfaction with the co-creation performance," *Tour. Manag.*, 2012.
- [11] I. G. M. Karma and J. Susanti, "Development of integrated information system for travel bureau company," in *Journal of Physics: Conference Series*, 2018, vol. 953, no. 1.
- [12] Z. Zhao, D. Wu, and S. Sha, "Bargaining power of suppliers and buyers, and accounting conservatism—evidence from Chinese manufacturing listed companies," *J. Financ. Risk Manag.*, vol. 4, no. 01, p. 11, 2015.
- [13] I. G. M. Karma and J. Susanti, "Development of account receivable and payable system for travel bureau company," *Journal of Physics: Conference Series*, 2018, vol. 953, no. 1.
- [14] J. Susanti and I. G. M. Karma, "Developing tour package price system in travel bureau companies," *Int. J. Appl. Sci. Tour. Events*; vol. 3, no. 1, June 2019.
- [15] W. Ji, "Dynamic pricing of perishable products with competition," *Open J. Soc. Sci.*, vol. 3, no. 03, p. 48, 2015.
- [16] G. Catenazzo and E. Fragnière, "Pricing traditional travel agency services: A theatre-based experimental study," *J. Serv. Sci. Manag.*, vol. 3, no. 2, p. 272, 2010.
- [17] A. L. C. Chan, E. Lee, and S. Lin, "The impact of accounting information quality on the mispricing of accruals: The case of FRS3 in the UK," *J. Account. public policy*, vol. 28, no. 3, pp. 189–206, 2009.
- [18] P. Bocij, A. Greasley, and S. Hickie, "Business information systems: Technology, development and management," Harlow, England: Pearson education, 2008.
- [19] R. Ö. Kutanis and M. Mesci, "Information management and business performance in the hotel industry: Effects of innovations," *J. Travel Tour. Res.*, vol. 13, no. 1/2, p. 18, 2013.
- [20] H. S. Ensour and T. M. Alinizi, "The impact of management information systems (MIS) technologies on the quality of services provided at the university of Tabuk," *Int. J. Netw. Secur. Its Appl.*, vol. 6, no. 2, p. 1, 2014.
- [21] A. U. Umeji and C. A. Obi, "Cost accounting skills needs of small business operators," *Am. J. Ind. Bus. Manag.*, vol. 4, no. 5, p. 246, 2014.
- [22] L. Rajaobelina, "The impact of customer experience on relationship quality with travel agencies in a multichannel environment," *J. Travel Res.*, 2018.
- [23] J. Sánchez, L. Callarisa, R. M. Rodríguez, and M. A. Moliner, "Perceived value of the purchase of a tourism product," *Tour. Manag.*, 2006.
- [24] L. J. Lawton and D. B. Weaver, "Travel agency threats and opportunities: The perspective of successful owners," *Int. J. Hosp. Tour. Adm.*, 2009.
- [25] B. Rusu, "The impact of innovations on the business model: exploratory analysis of a small travel agency," *Procedia - Soc. Behav. Sci.*, 2016.
- [26] N. Yüzbaşıoğlu, P. Çelik, and Y. Topsakal, "A research on innovation in small and medium-sized enterprises in tourism industry: Case of travel agencies operating in Antalya," *Procedia - Soc. Behav. Sci.*, 2014.
- [27] L. Huang, C. Y. Yung, and E. Yang, "How do travel agencies obtain a competitive advantage?: Through a travel blog marketing channel," *J. Vacat. Mark.*, 2011.
- [28] S. Dolnicar and C. Laesser, "Travel agency marketing strategy: Insights from Switzerland," *J. Travel Res.*, 2007.
- [29] Q. Ye, R. Law, B. Gu, and W. Chen, "The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings," *Comput. Human Behav.*, 2011.
- [30] R. S. Pressman and B. R. Maxim, *Software Engineering: A Practitioner's Approach*, Eighth Edition. 2015.
- [31] B. McMillin, *Software Engineering*, Computer. 2018.
- [32] C. Larman, *Applying UML And Patterns: An Introduction To Object Oriented Analysis And Design And Iterative Development*. India: Pearson Education, 2012.
- [33] J. Whitten and L. D. Bentley, *Systems analysis and design methods*, McGraw-Hill Education, 2007.
- [34] J. A. Hoffer, *Modern systems analysis and design*, 6/e. Pearson Education India, 2012.
- [35] R. Y. Lee and R. Y. Lee, *Object-oriented analysis*, in *Software Engineering: A Hands-On Approach*, 2013.
- [36] M. Mukherjee, *Object-Oriented Analysis and Design*, 2017.
- [37] R. Y. Lee and R. Y. Lee, *Object-oriented design*, in *Software Engineering: A Hands-On Approach*, 2013.
- [38] Object Management Group, *OMG unified modeling language (OMG UML)*, super structure, 2011.
- [39] M. Boggs and W. Boggs, *Mastering UML with rational rose 2002*, Alameda, CA, USA: SYBEX Inc., 2002.
- [40] J. Rumbaugh, I. Jacobson, and G. Booch, *Unified Modeling Language Reference Manual*. Pearson Higher Education, 2004.
- [41] E. Kindler and I. Krivy, "Object-oriented simulation of systems with sophisticated control," *Int. J. Gen. Syst.*, vol. 40, no. 3, pp. 313–343, 2011.
- [42] R. P. Ten Dyke and J. C. Kunz, *Object-Oriented Programming*. IBM Syst. J., 2010.
- [43] M. Van Dooren, D. Clarke, and B. Jacobs, *Subobject-oriented programming*, in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2013.