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THE BORDA METHOD FOR SCORING PARKING OFFICER PERFORMANCE AT DEPARTEMENT OF TRANSPORTATION ASAHAN

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Abstract: Determination of the best performance of parking attendants at the Asahan District Transportation Service aims to increase responsibility and high loyalty to get satisfactory performance results and award parking attendants with the best performance. The assessment of the best performance of parking officers was carried out by 3 assessors namely traffic engineering management, parking section, parking administration staff. The problem in assessing the best performance of parking attendants is that there is no structured system so that the assessment time is quite long, around 2-3 weeks. In addition, the assessment still tends to be subjective, for example the parking attendant's assessment is based on closeness and kinship, causing jealousy. Overcoming this requires a computer system that helps decision making, namely a decision support system for determining the best performance of parking attendants at the Asahan District Transportation Service in this study using the BORDA method. The borda method is used to combine the results of the decision assessment of each appraiser so that the final result is the best performance of the parking attendant. The purpose of this research is to create a computerized system that will later assist in determining the best performance appraisal of parking attendants every year. Based on the research results of the system for determining the best performance of parking attendants in the form of ranking the final score of each parking attendant. The highest value is used as the best performance suggestion for parking attendants.

Keywords: borda method; decision support system; parking attendant performance

Abstrak: Penentuan kinerja terbaik petugas parkir pada Dinas Perhubungan Kabupaten Asahan bertujuan untuk perlu meningkatkan tanggung jawab dan loyalitas yang tinggi mendapatkan hasil kinerja yang memuaskan dan pemberian perhargaan bagi petugas parkir memiliki kinerja terbaik. Penilaian kinerja terbaik petugas parkir dilakukan oleh 3 penilai yaitu manajemen rekayasa lalu lintas, seksi parkir, staff administrasi parkir. Permasalahan dalam penilaian kinerja terbaik petugas parkir adalah belum ada sistem yang terstruktur sehingga waktu penilaian cukup lama sekitar kurang lebih 2-3 minggu. Selain itu penilaian masih cenderung subjektif misalnya penilaian petugas parkir berdasarkan kedekatan dan kekeluargaan sehingga menyebabkan kecemburuan. Mengatasi hal tersebut diperlukan suatu sistem komputer yang membantu pengambilan keputusan yaitu sistem pendukung keputusan penentuan kinerja terbaik petugas parkir pada Dinas Perhubungan Kabupaten Asahan dalam penelitian ini menggunakan metode *BORDA*. Metode borda digunakan untuk menggabungkan hasil penilaian keputusan dari tiap penilai sehingga dapat memperoleh hasil akhir berupa kinerja terbaik petugas parkir. Tujuan dari penelitian ini adalah untuk membuat suatu sistem komputerisasi yang nantinya akan membantu dalam menentukan penilaian kinerja terbaik petugas parkir disetiap tahunnya. Berdasarkan hasil penelitian dari sistem penentuan kinerja terbaik petugas parkir berupa perangkingan dari nilai akhir setiap petugas parkir. Nilai tertinggi dijadikan sebagai saran kinerja terbaik petugas parkir.

Kata kunci: metode borda; kinerja petugas parkir; sistem pendukung keputusan;

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INTRODUCTION

In today is rapid development of technological science, the influence of information is said to be very advanced. Information systems are included in one of the technological needs in this era. Information systems are used to collect and process data [1].

The progress achieved in science and technology has resulted in many changes for the present and the future. The data and information obtained by an agency will constantly increase, so it is not easy to process in a manual way. Designing a system requires an object that will be used as research material is the best performance assessment of parking officers at the Asahan Regency Transportation Office.

The level of satisfaction with parking attendants is a function of the difference between user or consumer expectations and the performance provided, meaning that if performance meets expectations, consumers will be satisfied. If performance exceeds expectations, consumers will be very satisfied [2].

Improving user satisfaction of parking attendants at the Asahan District Transportation Office is important as input that can satisfy the desires of the community and improve the best performance of parking attendants for effective and efficient community service and is expected to contribute to the progress of the Asahan District Transportation Service.

Asahan Regent Regulation Number 31 of 2020 concerning the management and determination of the location of the object of retribution for parking services on the edge of public roads in the Asahan Regency area chapter II article 2 paragraph 2 states that every person parking a motorized vehicle in a parking lot must comply with the parking instructions installed and instructions given by parking officers [3]. The performance of parking officers greatly affects the benefits obtained from the Asahan Regency Transportation Office. Improving the performance of parking officers, the Asahan Regency Transportation Agency needs to go through a parking officer assessment process to determine the best parking officer for the scheduled period.

The award obtained by the winner of the best parking attendant can be in the form of basic necessities and a charter. The best parking officer assessment has assessment criteria such as discipline, loyalty, and responsibility. The best parking officer assessment at the Asahan Regency Transportation Office has been done manually. The assessment is carried out by the Head of Traffic Engineering, Head of Parking Section, and Parking Administration Staff. However, there is no structured system so that the assessment time becomes quite long around approximately 2-3 weeks. So the purpose of the research is to design a decision support system to make the process of evaluating the performance of parking attendants the best so that it can be easier and more accurate. The method that can be used in decision support systems is the borda method. The borda method is used to combine the results of the decision assessment from each appraiser so that the final result is the best performance of the parking attendant.

Some previous works by other studies that discuss almost the same problem are entitled "Application of the Borda Method in the Selection of the Best Disaster Management Agency Volunteer Team in Medan City". The

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results focused on the application of the borda method make it easier for BPBD Medan City to obtain decision values in selecting the best Regional Disaster Management Agency volunteers in Medan City [4].

Research with the title "Socialization of Motivation on the Performance of Parking Attendants at the Padangsidimpuan City Transportation Service" The results of the research are education for users of parking services and appeals such as installing signposts, banners in strategic parking locations regarding rights and obligations [5].

Research with the title "Implementation of Parking Management Policies on the Side of Gajah Mada Public Roads by the Asahan District Transportation Office". The results of the study show that implementation has been carried out quite well in accordance with statutory regulations [6].

Research with the title "Decision Support System for the Selection of Winners of the Provincial Fish Cooking Competition by Applying the Borda Method". The results of the study where the process of winning the fish cooking competition that exists in the Marine and Fisheries Service [7].

Research with the title "Position Promotion Group Decision Support System with AHP and Borda Methods. The results of the research and discussion are a group decision support system in selecting employees for promotion in a company [8]. Furthermore, research with the title "Mobile Software for the Election of RT Heads Using the Android-Based Borda Method (Case Study at TR 46 Kelurahan 3-4 ULU). The result of the research is that the Borda method is applied to the RT chairman election system and can rank candidates for RT chairman [9].

METHOD

The borda method is one of the group decision-making methods where the selection process is based on assessments that often arise from the alternatives chosen. The principle of the borda method is to rank the alternatives [10]. The points that each alternative has from each decision maker are summed up to determine the winner. The alternative that gets the most points is considered the best alternative [11]. Calculation of the number of Borda points:

$$b_i = \sum_k N\text{-}r_{ik} \qquad (1)$$

Information:

b_i = number of points each alternative receives

N = number of alternatives

r_{ik} = alternative ranking

The step of the borda method from the highest ranked alternative is given the highest score, and so on, lower ranks are given lower scores, until the lowest rank is given a score of 0 or 1. The idea of the borda method is to ask voters to rank each candidate and give each candidate a score. Where there are n candidates to choose from, the first candidate or alternative is given n marks by the vector. The second candidate is given a value of n-1 and so on. The decision maker is to make a judgment and assign a score to each candidate [12].

Shows the results of the calculation of the application of the borda method to assess the best performance of parking attendants at the Asahan Regency Transportation Office with the table below In this section, the research design is no longer loaded but focused on the results of the research that has been done

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Table 1. Borda Value and Ranking

No	Alternative Name	Borda Points	Borda Value	Alternative	Rank
1.	Edy Simanjuntak	105	0,011075949	A4	1
2.	Trisna Triadi	103	0,010864979	A34	2
3.	Sahbudi	102	0,010759494	A12	3
4.	M.Ridwan Hsb	101	0,010654008	A19	4
5.	M.Yunus	101	0,010654008	A7	5
6.	Iskandar	100	0,010548523	A20	6
7.	Eri Sahbudi	99	0,010443038	A5	7
8.	HormanMarigan Sitompul	97	0,010232068	A66	8
9.	Sandi Harapan	96	0,010126582	A40	9
10.	Ridwan Hasibuan	96	0,010126582	A6	10

RESULT AND DISCUSSION

System analysis can be proposed as one of the techniques to describe the problem and find a picture of the current system at the Asahan Regency Transportation Agency with the analysis of the current system can be known.

As for now, the best performance assessment of parking officers at the Asahan Regency Transportation Agency is still manually carried out by the Head of the Traffic Engineering Division, the Head of the Parking Section, the administrative staff of the parking officers involved have not used the application system, but there is no structured system.

This research will display the system results from the application of the borda method of assessing the best performance of parking officers at the

Asahan Regency Transportation Office. The following are the results of the system implementation, namely:

Assessment Page

The assessment page is a page that displays the determination of the best performance of parking attendants that can be done by the user.

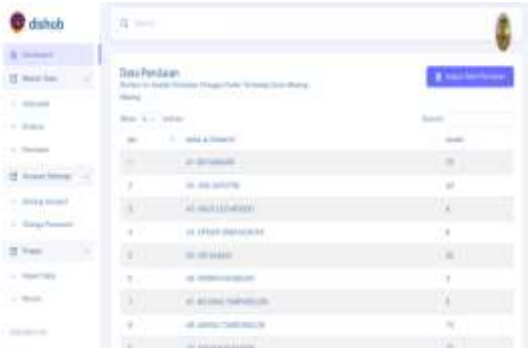

Image 1. Assessment Page

Assessment System Page

The research system page is to display the calculation of the assessment based on the data that has been input by the user.

Image 2. Assessment System Page

Assessment Results Page

The assessment results page is a

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page that will display the results of the assessment based on the data that has been input by the user.

Image 3. Assessment Results Page

Print Report Page Display

The report print page is a page that displays the report result data in pdf format which aims to be able to print the results or download the calculation results. The following is a print view of the report:

Image 4. Print Report Page Display

CONCLUSION

By implementing a decision support system application, it can make it easier for the Asahan Regency Transportation Agency to determine the best performance of parking officers. The system is able to produce calculations of the decision support system for the application of the borda method for assessing the best performance of parking officers with data that has been previously inputted so as to minimize the location of errors.

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