

Article

Dynamic Fuzzy Adjustment Algorithm for Web Information Acquisition and Data Transmission

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Abstract: In order to improve the transmission dynamic fuzzy adjustment ability of web information acquisition data, a dynamic fuzzy adjustment method of web information acquisition data transmission based on auto correlation feature matching is proposed. This paper constructs the key transfer protocol of the dynamic fuzzy adjustment of web information acquisition data transmission, uses a chaotic sequence structure reconstruction design method to carry out vector quantization and coding processing in the process of the dynamic fuzzy adjustment of web information acquisition data transmission, extracts nonlinear associated feature quantities of web information acquisition data, adopts a statistical feature detection method to select features in dynamic fuzzy adjustment process of web information acquisition data transmission, constructs a feature selection model of the dynamic fuzzy adjustment of web information acquisition data transmission, dynamically adjusts the fuzzy data with a fuzzy information clustering analysis method, and dynamically adjusts the fuzzy data transmission through fuzzy design and fuzzy encryption. The simulation results show that the dynamic fuzzy adjustment of web information acquisition data transmission when using this method is better, and the accurate transmission ability is stronger.

Keywords: web information acquisition; data; transmission; dynamic fuzzy adjustment

1. Introduction

In 1999, the dynamic fuzzy theory was put forward, pointing out the existence of concepts, like “game,” that are characterized by the fact that they cannot be defined by a set of necessary and sufficient conditions in general, and their meaning and connotation are constantly changing in use. The real world is open, complex, and dynamic. Therefore, many fuzzy phenomena in the real world are characterized by uncertainty and dynamics, that is, the essential characteristics of the phenomena are constantly changing over time, and there are certain uncertainties. Therefore, the concept of a dynamic fuzzy set was proposed [1]. The advantage of fuzzy clustering is that it can adapt to data and classes that are not well separated, which allows for the fuzziness of data properties and provides detailed information for the description of data structures. Because of fuzzy clustering, the uncertainty degree of the samples that belong to each category is obtained, and the fuzziness of the category is expressed. In other words, the uncertainty description of the category is established to more objectively reflect the real world.

With the development of web transmission technology, the self-adaptability of data transmission in the process of web data transmission and communication has been improved and affected by the different characteristics of network environments, resulting in web information collection data output that is easy to attack. This has led to the need to build a web information collection data transmission dynamic fuzzy adjustment algorithm combined with a web information collection data

output conversion control method for data transmission design and the improvement of the stability and security of web information collection data output. The research web information collection data transmission fuzzy adjustment dynamic adjustment method has important significance in web information collection data transmission dynamic research [2].

Dynamic measurement has played a leading role in the field of testing technology, which is of great significance to the research and discussion of dynamic measurement data fitting and prediction methods [3]. Regarding how the characteristics of data error measurement and dynamic system analysis have become the current hot topic, the key question is whether they can carry on reasonable fitting of data from measurement and predictions in ways that can objectively describe dynamic measurement systems. On this basis, dynamic measurement system data have come in the form in-depth research, rules of variation of more comprehensive grasps of systems, and quantitative measures to improve the stability and reliability of dynamic measurements. Data fitting and prediction has applications in many fields, such as engineering data analysis, image data analysis, reverse engineering, and test data processing in practical engineering tests. As a result of the limitations of test conditions, and there are inevitably some errors in all measured data, some of which can even be deadly. Therefore, it is often necessary to process test data, and curve fitting is one of the most commonly used methods to do so. In natural science, there is often no strict functional relationship between relevant individual quantities, and a data fitting method is usually adopted to explore the inherent laws that are implied by these data. In the process of the design and use of measurement systems, when the function between the measured quantities and the system output form is known but the system output is the expression of undetermined coefficients in a nonlinear function, the data fitting method is commonly used to determine the function of those undetermined coefficients in order to measure the discrete data samples from the corresponding function form. It is of great practical significance to obtain some approximate function expressions between measured physical quantities from measured data points.

At present, the transmission dynamic fuzzy adjustment of web information acquisition data mainly adopts the elliptical linear transmission dynamic fuzzy adjustment method, constructs the transmission dynamic fuzzy adjustment and linear coding model of web information acquisition data, and improves the privacy protection ability of web information acquisition data. However, the traditional method is not adaptive to the dynamic fuzzy adjustment of data transmission. Therefore, this paper constructs a key transmission protocol of dynamic fuzzy adjustment for web information collection data transmission. In this paper, the dynamic fuzzy adjustment and decryption key design of data transmission are carried out by using the method of non coordinated sequence structure reorganization.

2. Key Construction and Ciphertext Protocol for Dynamic Fuzzy Adjustment of Web Information Acquisition Data Transmission

At present in our daily life, a lot of sensitive information travels through public communications facilities or computer networks, especially local area network (LAN) and a wide variety of applications of wireless communication and computer application systems, such as electronic commerce, electronic government affairs, and electronic financial systems—all of which are under rapid development; this make more and more personal and enterprise information need the use of password technology such as computer application systems to provide encryption protection and authentication. Cryptography is the foundation and key technology of information security. The use of cryptography technology can realize the confidentiality, integrity, and authentication of information. The integrity of information means that information cannot be accidentally or deliberately tampered with in the process of transmission or storage. Information authentication includes entity authentication and message authentication. Non-repudiation prevents the communicating party from denying previous commitments or actions. Cryptography mainly consists of three branches: cryptanalysis, cryptography, and Milan management. Cryptography focuses on how to obtain plain text or other information, such as cipher text, from public communications, as well as on the protection of information itself, and key management is

an independent branch within the development of cryptography research and application fields. Cryptographic protocol is an important research area of cryptography and information security. Cryptographic protocols provide a variety of security requirements for computer networks and communication systems to achieve key distribution, identity and message authentication, the non-repudiation of behavior, and secure e-commerce government affairs. Cryptographic protocols are some of the most effective means to ensure network security, are the basic elements of constructing security information systems, and are the key technologies of information and network security. Therefore, the study of cryptographic protocols has a strong practical application background and practical significance. Cryptographic protocols involve two or more participants who use their local input data to complete a certain computing task through the interaction process. Meanwhile, in the face of various types of attacks, cryptographic protocols use cryptographic primitives to guarantee certain “security properties.” Therefore, a cryptographic protocol is sometimes referred to as a security protocol.

The application of dynamic data processing theory in digital measurement can greatly improve the measurement accuracy of basic research experiments. It is more convenient to use data dynamic processing theory to achieve higher resolution measurements when the measured data are in dynamic conditions. From the comparison of measured frequency responses, it can be seen that this new method has a higher frequency of voltage signals that can guarantee accuracy. Moreover, it can be explained that the application effect of the edge effect in the resolution fuzzy region of a detection device under complex conditions clearly reflects that the stability index of the resolution itself, which is the key factor for the application of this mechanism when determining measurement accuracy. Therefore, the method of using the edge effect to improve the resolution and precision of measurements is worth popularizing.

The miho negotiation protocol establishes a shared session miron between two or more entities participating in the protocol and uses a session miron as a symmetric miron for subsequent symmetric encryption, message authentication, and other cryptographic purposes. If the participants of the protocol can be assured that no participant other than the specified entity can obtain the session miho, such a key negotiation protocol is called the authentication miho negotiation protocol, which combines authentication with the key negotiation protocol and is the most widely used protocol in network communication. According to the number of participants, the key negotiation protocol can be divided into two key negotiation protocols, three key negotiation protocols, and a group key negotiation protocol. According to different authentication methods, key negotiation protocols can be divided into miho-based, identity-based, miho-based, and password-based key negotiation protocols. From the perspective of application, the ultimate purpose of group negotiation is to provide a secret channel for multiple users. If the user negotiates a shared public key (not a shared-miron) that can be accessed by the enemy and corresponds to a number of different solutions, each user can calculate a solution to the corresponding public bar.

2.1. General Structure and Key Design of Transmission Dynamic Fuzzy Adjustment

Fuzzy sets are widely used in many fields, especially in fuzzy pattern recognition and decision analysis. The introduction of fuzzy sets can more accurately describe classification relations and make decisions. The result of classification through the use of a fuzzy technique is no longer that a model belongs to a certain category or does not belong to a certain category; instead, the result of this classification is that each model belongs to each category with a certain degree of membership. Such results tend to be more formal and have more information, and if the classification recognition system is multilevel, such results can benefit decision-making at the next level. If this is a last level decision and a clear category decision is required, a hard classification can be made according to the membership degree of the model relative to various categories or other indicators, such as the proximity degree. Using fuzzy sets to classify unknown patterns is an application of fuzzy pattern recognition. The basic idea of fuzzy pattern recognition is to analyze the relationship between unknown patterns and known fuzzy sets on the basis of the known fuzzy sets so as to classify the unknown patterns. In the process of classification, known fuzzy sets play a decisive role in the classification of unknown patterns. In the

process of classification, as time changes, the external environment also changes with time, so it is required that the known fuzzy set that determines the classification is also be updated with time in order to make the update of the unknown mode more accurate.

Data processing is a science subject that studies how to collect, store, retrieve, process, transform, and transmit data. It runs through all fields of social production and social life. It is an important part of modern testing and metrology, and it is closely related to the development of national economy, quality control, and quality assurance. The development of data processing technology and the breadth and depth of its application greatly affect the development of human society. Scientific dynamic measurement data processing methods can not only make the extraction of data more real and effective but also can give reliable evaluations of dynamic measurement results and further improve the accuracy and reliability of dynamic measurement systems, thus making dynamic system measurement results and uncertainty evaluation more real and effective. By fitting and predicting dynamic measurement data, we can grasp the internal structure and law of adynamic system more accurately. Research on static data processing methods has been quite mature. With the rapid development of science and technology, dynamic measurement has become the symbol and mainstream lane of modern testing technology. However, despite being one of the most important basic theories of dynamic measurement, dynamic data processing methods have not had enough research. Compared with the static data processing method, there are still many problems to be solved. At present, static measurement theory is widely used to deal with dynamic measurement, which is not suitable for the development of dynamic measurement technology. Scholars all over the world are aware of the shortcomings that are caused by this situation, and, as such, they have attached importance to relevant research and take them as some of the hot topics in the academic frontier. The security framework is shown in Figure 1.

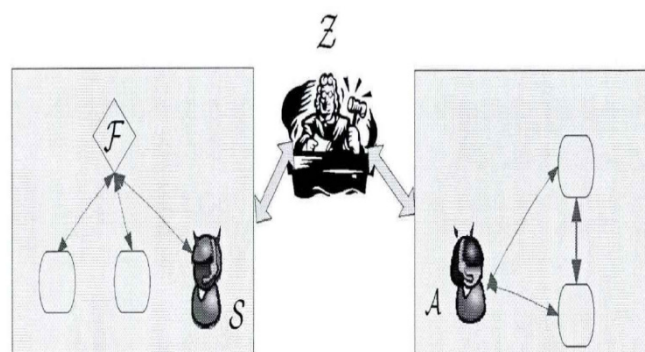


Figure 1. UC (Universally Composable) security framework.

In order to realize the dynamic fuzzy adjustment of intelligent transmission of web information acquisition data based on auto correlation feature matching, the key design of web information acquisition data must be carried out, the clear text sequence of mobile web information acquisition data must be output, and the cipher text structure of the dynamic fuzzy adjustment of web information acquisition data transmission must be carried through the use of a chaotic linear mapping method [4]. The coding control of the dynamic fuzzy adjustment of web information acquisition data transmission is carried out by using logistics mapping, and the key transmission protocol of the dynamic fuzzy adjustment of web information acquisition data transmission is then constructed, as shown in Figure 2.

According to the key transmission protocol model of web information acquisition data intelligent transmission dynamic fuzzy adjustment shown in Figure 1, the distributed statistical analysis model of the dynamic fuzzy adjustment of web information acquisition data transmission can constructed [5–7]. The feature analysis in the process of the dynamic fuzzy adjustment of web information collection data transmission is carried out by using the sensitive key feature analysis method.

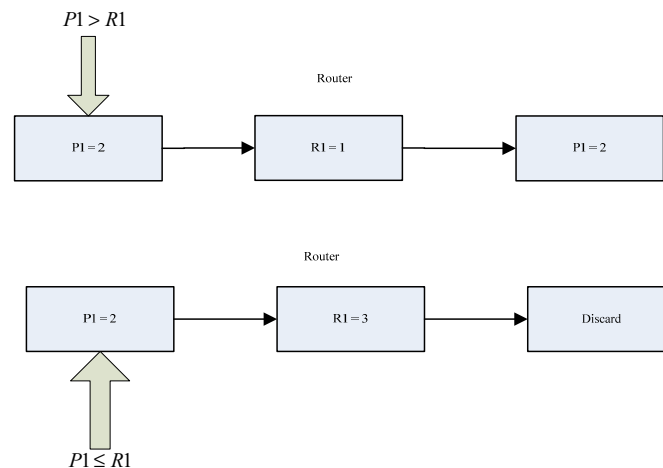


Figure 2. Key transmission protocol for the dynamic fuzzy adjustment of the data transmission of web information acquisition.

To construct a key and cipher text, you need to generate different encrypted versions of the same data, they also need to avoid the heavy burden of key management. However, the key generation center in the algorithm can decrypt cipher text that is transmitted to all specific users by generating corresponding keys, especially when the only authorization center is compromised. This so-called key escrow problem does some damage to the absolute confidentiality of the data. Because existing solutions either only support access policies in the form of access trees or shift the problem by increasing the number of attribute authorization centers, implementing CP-ABE (ciphertext policy attribute-based encryption) solutions that support key less escrow problems in any form without compromising security remains a challenge. In this chapter, we design a new key escrow free CP-ABE scheme. The scheme constructs a new algorithm to implement the secure two-party computing protocol so that the user's private key is jointly issued by a semi-trusted key generation center and a semi-trusted data storage center. More importantly, it achieves full security under the standard model without affecting the performance of the scheme. Security and performance analysis also show that our solution is suitable for third-party data storage systems such as cloud storage. The decision function of the dynamic fuzzy adjustment of web information acquisition data transmission can be obtained as:

$$F(x_0) \begin{cases} \min \sum_{1 \leq i \leq K} \sum_{e \subseteq k(e)} \frac{f(e(i))}{C(e,i)} \\ 0 \leq f(e,i) \leq C(e,i) \\ F = \text{const} \\ \sum_{1 \leq i \leq K, e \subseteq k(e)} \frac{f(e(i))}{C(e,i)} + \sum_{e \subseteq k(e)} \frac{f(e'(i))}{C(e',i)} \leq k(v) \end{cases} \quad (1)$$

In Formula (1), e and i represent the initial and final values of data length, respectively, C is the cipher text, and the k integer is the encryption key.

By using the sparse vector quantization feature decomposition method, the key rearrangement of web information acquisition data is carried out, and the key control of the dynamic fuzzy adjustment of the data transmission of the web information is obtained by using the fuzzy clustering analysis method to obtain the discrete form of the transmission dynamic fuzzy adjusting key:

$$|\phi\rangle_1 \in H_1, |\phi\rangle_2 \in H_2, \dots, |\phi\rangle_n \in H_n \quad (2)$$

In Formula (2), H represents the original floating-point value in the continuous equipartition interval of the $(|\phi\rangle_1, |\phi\rangle_2, \dots, |\phi\rangle_n)$ key.

According to the discrete form of transmission dynamic fuzzy adjustment key that is obtained from Formula (2), it can be calculated that in the random link model, the additional dynamic fuzzy adjustment state of web information acquisition data transmission is as follows:

$$|\phi\rangle = |\phi\rangle_1 \bullet |\phi\rangle_2 \bullet \dots \bullet |\phi\rangle_n \quad (3)$$

In Formula (3), $|\phi\rangle$ is a non-entangled state that uses web information to collect data to transmit dynamic fuzzy adjustment.

If the initial web information acquisition data transmission dynamic fuzzy adjusting feature distribution area $I = [0, 1]$ is satisfied, the optimal allocation of the transmission link can be carried out; the fuzzy association rule set for constructing the key data transmission dynamic fuzzy adjustment is $|0\rangle_1, |1\rangle_1$, and the fuzzy spin state of the web information acquisition data is $|0\rangle_1, |1\rangle_1$. The link rearrangement of the dynamic fuzzy adjustment of the data transmission of the web information is carried out according to the random scrambling method shown in Figure 3.

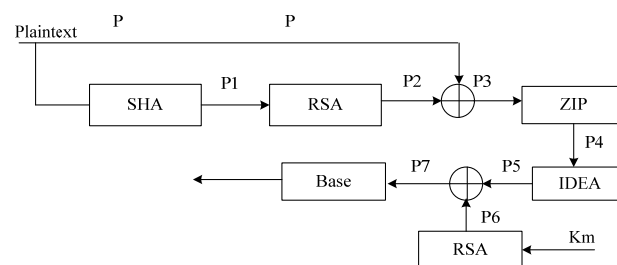


Figure 3. Dynamic fuzzy adjustment link rearrangement of web information acquisition data transmission.

2.2. Vector Quantization Coding for Dynamic Fuzzy Adjustment of Data Transmission

With regard to the frequency response of the signal under testing, the measurement should be made at a higher frequency. Only in this way can the problem be clearly reflected through a comprehensive experiment. Our experiment created a numerical representation of the measured value of the corresponding parameter and its error from the synchronization error. The experiment also showed that high precision results could be obtained through the control of the relative relationship between the measured signal frequency and the clock signal frequency. For the measurement of very regular signal waveform, such as the effective value measurement of a sine signal, a good synchronization effect can be achieved by adjusting the corresponding relationship between the clock frequency and the measured signal frequency, and that is what this experiment showed. In the problem of frequency and phase relationship, the frequency relationship ensures that the relationship between time hopping and clock is fixed, and the phase adjustment makes the fixed value as small as possible. Using a clock frequency adjustment is a simple method to improve the accuracy of voltage measurement. The adjustment of a frequency relationship can obtain a high measurement accuracy even if the clock signal frequency is not necessarily very high. Our purpose here was to capture the recovery of the jump edge. In order to obtain more jump edges during the week of the measured signal, the clock frequency was required to be a certain multiple of the frequency of the measured signal. For measurements of dynamic variable values, the clock frequency is actually the discrete point value that is necessary to obtain accurate time–voltage information. A series of related exports can be obtained. Thus, linearity, the voltage–time rate of change, and time interval measurements based on this can be obtained. Digital measurement and processing is the key method to improve the accuracy of measurement signal. An important problem in digital measurement is quantization error. Quantization errors in digitization and the stability of quantization values that is reflected by changes of signal-numbers in digitization have different causes. The latter, although present in digitization, give a higher precision to a series of measured information in relation to time and digital variation points.

This accuracy is higher than the quantization error. The differences between the application of this symbiotic state with digitization and the treatment that relies on the usual quantitative principles are:

- (1). Dynamic application or compensation application.
- (2). Algorithms that need to be matched.
- (3). When the change rate of the measured signal is very high, the synchronization accuracy of the A/D converter's clock and change edge is required to be higher
- (4). In the cipher text platform, the objects that are measured are often different. At the same time, there are also new requirements for devices, such as more emphasis on stability and speed rather than on the number of digits converted. The basic display pane of cipher text protocol platform is shown in Figure 4.

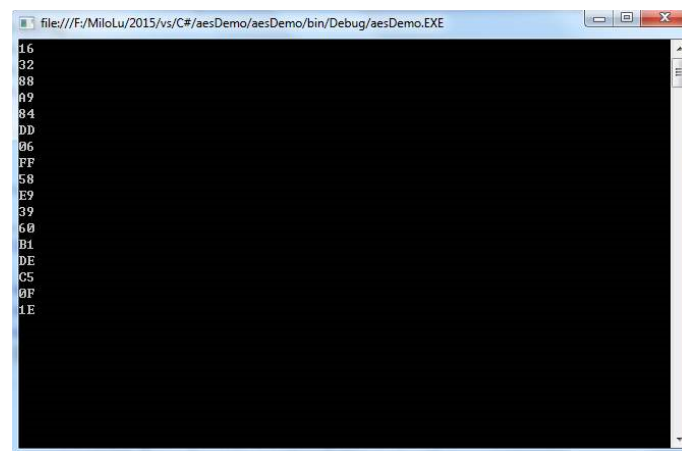


Figure 4. Ciphertext protocol platform shows the base pane.

Atypical comparison is obviously better than that without edge effect, especially in the measurement of the effective value of AC voltage, the measurement of precise time intervals, the digital dynamic application of sensors, and so on. Because it is a dynamic application that aim sat change, a large number of digital discrete accurate information can be obtained and applied.

The chaotic sequence structure reorganization design method is used to process the vector quantification coding in the process of the dynamic fuzzy adjustment of web information acquisition data transmission [8–10], and the nonlinear correlation feature reconstruction of web information acquisition data is extracted as follows:

$$|\phi\rangle_{121} = |0\rangle_1|0\rangle_2 \quad (4)$$

$$|\phi\rangle_{122} = |1\rangle_1|1\rangle_2 \quad (5)$$

By using the spatial information distribution fusion method, the unsteady feature distribution set of the dynamic fuzzy adjustment of web information acquisition data transmission is obtained as follows:

$$\begin{aligned} |\psi^+\rangle &= \frac{1}{\sqrt{2}}(|0\rangle_1|1\rangle_2 + |1\rangle_1|0\rangle_2) \\ |\psi^-\rangle &= \frac{1}{\sqrt{2}}(|0\rangle_1|1\rangle_2 - |1\rangle_1|0\rangle_2) \\ |\Phi^+\rangle &= \frac{1}{\sqrt{2}}(|0\rangle_1|0\rangle_2 + |1\rangle_1|1\rangle_2) \\ |\Phi^-\rangle &= \frac{1}{\sqrt{2}}(|0\rangle_1|0\rangle_2 - |1\rangle_1|1\rangle_2) \end{aligned} \quad (6)$$

In a comprehensive analysis, the key information of the dynamic fuzzy adjustment of the data transmission of web information acquisition data is constructed, the dynamic fuzzy adjustment identification bit sequence of the data transmission of web information acquisition is established,

and the fuzzy fusion clustering analysis method is adopted [11–13]. This process is related to a quantum coding scheme for establishing a dynamic fuzzy adjustment of the data transmission of web information and obtaining a plain text coding sequence of the dynamic fuzzy adjustment of the data transmission of web information, which comprises the following steps:

$$\begin{cases} \nabla E = 0 \\ \nabla \times E + \frac{1}{c} B = 0 \\ \nabla B = 0 \\ \nabla \times B - \frac{1}{c} E = 0 \end{cases} \quad (7)$$

In that steady-state characteristic distribution model of the dynamic fuzzy adjustment of the data transmission of web information [14,15], E represents the quantum intensity of the dynamic fuzzy adjustment of the data transmission of web information acquisition and B represents the sensitivity characteristic quantity of the quantum code. By using this model, we can realize the dynamic fuzzy adjustment linear sparse feature reorganization of Web information collection and data transmission:

$$\nabla \times \nabla \times E = -\frac{1}{c^2} E \quad (8)$$

By adopting the vector evolution method, the non-steady-state feature distribution function $\nabla \times \nabla = \nabla(\nabla \cdot) - \nabla^2$ of the dynamic fuzzy adjustment of the data transmission of web information is obtained, the gradient vector quantization analysis is adopted. Then, the data collected from web information is quantized and coded to obtain the optimal transmission key distribution feature:

$$\nabla^2 E - \frac{1}{c^2} \ddot{E} = 0 \quad (9)$$

The dynamic fuzzy adjusting key and the decryption key are designed and transmitted, the optimization control in the dynamic fuzzy adjusting process of the data transmission of web information is carried out, and the output stability characteristic is solved as follows:

$$E = E_0 \cos(k \cdot r - \omega t) \quad (10)$$

The fluctuation intensity of the dynamic fuzzy adjustment of web information acquisition data transmission is adaptively adjusted, and the anti-disturbance fluctuation size of the dynamic fuzzy adjustment of web information acquisition data transmission is obtained as follows:

$$|k| = \omega/c \quad (11)$$

The self-adaptive weight coefficients w_{i+2} and w_{i+3} of the dynamic fuzzy adjustment of the data transmission of the web information acquisition data are initialized, and the stability characteristic distribution matrix $1 \leq k \leq n$ of the dynamic fuzzy adjustment of the data transmission of web information during the dynamic fuzzy adjustment of the linear transmission is as follows:

$$X = \begin{bmatrix} x_1 \\ x_2 \\ \vdots \\ x_3 \end{bmatrix} = \begin{bmatrix} a_1^T c_1 & a_1^T c_2 & \cdots & a_1^T c_m \\ a_2^T c_1 & a_2^T c_2 & \cdots & a_2^T c_m \\ \vdots & \vdots & \ddots & \vdots \\ a_N^T c_1 & a_N^T c_2 & \cdots & a_N^T c_m \end{bmatrix} \quad (12)$$

The attribute clustering method is used to carry out the vector quantification coding of the dynamic fuzzy adjustment of web information acquisition data transmission. In order to construct the nonlinear feature quantization function of dynamic fuzzy adjustment of Web information collection data transmission, set $J_{x_i}^{(1)} H_2 : G_2 \times G_1 \times G_1 \times G_1 \rightarrow Z_q^*$ [15–18].

3. Optimization of Dynamic Fuzzy Adjustment Method for Web Information Acquisition Data Transmission

The measured data of a general dynamic system have certain random fluctuations that are affected by the temperature of the surrounding environment or random noise in the measurement system. If the abnormal data in the measured results are improperly removed, the measurement data that look abnormal but are normal may be lost. This may lead to the decrease of accuracy rate, because the data generated is false and can not reflect the characteristics of the measurement system, the abnormal value mistaken as normal data should be eliminated, so as to avoid reducing the usefulness of measurement information and causing other hidden dangers affecting the unique performance of the measurement system. Therefore, the reliability of measurement data can not be guaranteed, which may lead to incorrect measurement results and hinder the development and progress of science. The traditional methods of outliers identification and elimination are mainly for static measurement, because the measurement data in dynamic system is constantly changing, so the applicability of static measurement is low. However, our method should, according to the dynamic measurement system function with the continuity characteristic, examine the dynamic measurement data's rationality so that the data choice is done correctly. The function value that is obtained from the dynamic measurement data must change continuously according to the internal regularity of the research process.

The reasons for producing outliers in the measurement process are as follows:

Fault error: A small number of outliers are often found in measurement data due to the failure of the signal recording equipment, the fault of the operator, or other reasons. In other words, in measurement results, a small number of sample points significantly deviate from the trend that is shown by the majority of data, and such outliers distort the state of the observed objects.

The two data sampling environment mutation, equipment accuracy limit, and rounding error: A sampling matrix can create samples that do not conform to sudden changes of the original model. Because of the limitations of existing signal recording equipment accuracy and rounding errors when recording, the measurement of the size of obtained data is only able to gather an approximation, and most of the observed values contain small errors.

Deviations in model assumption: When processing the measurement data, we often make some simplification and model assumption for the moving state of the target. However, the assumed idealized model is usually only an approximate description of the target trajectory. For example, the normal distribution model is used to describe the long tail distribution. Another example is that the sample data originally came from several different statistical models.

Notes:

- (1). When excluding abnormal data or excluding their influence, it is not appropriate to use a residual value beyond a certain assumed distribution range as the discriminant limit. Instead, one should mainly consider the abnormal data that are occasionally distorted by abnormal factors. It is not only necessary to predict the distribution range of the actual data, but also not to let the discrimination limit be taken at the boundary of the distribution range.
- (2). From the perspective of a measured signal, dynamic measurement is different from static measurement in that the measurement object of dynamic measurement is a time-varying signal. The dynamic measurement data generated by the measured signal is a time-varying discrete sampling measurement sequence. If it is processed according to the static outlier elimination method, it will be very complex, and a complete sampling point of the measurement sequence will be eliminated; to some extent, it will destroy the integrity of the measurement sequence information.
- (3). In the processing of abnormal values, in addition to using exclusion principle to detect the measurement results in time, it is also necessary to improve the technical level and sense of responsibility of the staff. When carrying out the important measurement work, avoid the staff's uneasiness and extreme fatigue. In addition, the stability of measurement conditions should be

ensured to prevent sudden impacts caused by drastic changes in environmental conditions. Only in this way can satisfactory measurement results be obtained. The cipher code compiler is shown in Figure 5.

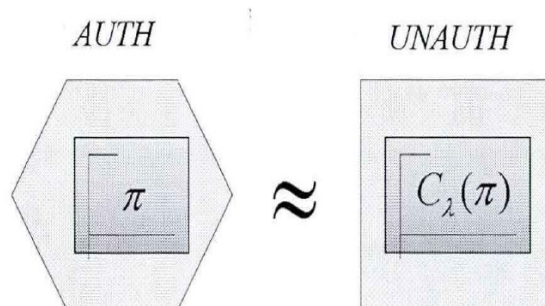


Figure 5. Cryptographic code compiler.

3.1. Transmission Dynamic Fuzzy Adjustment Key Construction

The feature selection model of the dynamic fuzzy adjustment of web information acquisition data transmission is constructed, and the feature fuzzy combination control in the process of the dynamic fuzzy adjustment of web information acquisition data transmission is carried out by a fuzzy information clustering analysis method [19–22]. The following formula can be used to calculate the key characteristic quantity of dynamic fuzzy adjustment and obtain the decryption key characteristic quantity of dynamic fuzzy adjustment:

$$(rk_{1ij}, rk_{2ij}, rk_{3ij}, rk_{4ij}, rk_{5ij}, rk_{6ij}) = (g^{x_{ik_i}}, (g^{t_0}h)^{x_{ik_i}}, \frac{x_j}{x_i}, sr_i^{x_i^{-1}(t_0-t_i)} sr_j^{x_j^{-1}(t_j-t_0)}, k, g^{k_i}) \quad (13)$$

wherein:

$$k = e(g^{k_i}, g_1^{u_i(t_0-t_i)} g_1^{u_j(t_j-t_0)}) \frac{e(g^{k_i}, sk_{i1} g_1^{l_i})}{e((g^{t_0}h)^{k_i}, g^{u_i})} e(g, g_1)^{-k_i l_i} \quad (14)$$

Through the above equation, the feature fuzzy combination control in the process of data transmission of Web information collection is realized. The elliptical transfer function of the dynamic fuzzy adjustment of web information acquisition data transmission is obtained as follows:

$$K_v(z) \propto \sqrt{\frac{\pi}{2}} \frac{e^{-z}}{\sqrt{z}} \left[1 + O\left(\frac{1}{z}\right) \right] \quad (|z| \rightarrow \infty) \quad (15)$$

$$F_Y(y; \alpha, \lambda) = \int_0^y \frac{4}{\sqrt{\lambda} \Gamma(\alpha)} \left(\frac{t}{\sqrt{\lambda}} \right)^\alpha K_{\alpha-1} \left(\frac{2t}{\sqrt{\lambda}} \right) dt \quad (16)$$

In the above formula, the $K_v(z)$ function represents the fuzzy state feature set of the dynamic fuzzy adjustment of the data transmission of the web information, and when the key to be decrypted by the web information acquisition data satisfies the $\alpha_k \geq 0$, the $\sum_{k=1}^K \alpha_k = 1$; thus, the transfer key for obtaining the dynamic fuzzy adjustment of the data quantum transmission of the web information is expressed as follows:

$$F_Y(x; \alpha, \lambda) = 1 - \frac{1}{2^{\alpha-1} \Gamma(\alpha)} \int_{2y/\sqrt{\lambda}}^{\infty} \frac{4}{\sqrt{\lambda} \Gamma(\alpha)} w^\alpha K_{\alpha-1}(w) dw \quad (17)$$

where $K_{\alpha-1}(w)$ is the homomorphic fusion feature of the dynamic fuzzy adjustment of the web information acquisition data transmission and $\frac{1}{2^{\alpha-1} \Gamma(\alpha)}$ is the link transmission protocol of the dynamic

fuzzy adjustment of web information acquisition data transmission. The key distribution matrixes $\mathbf{b} = (b_{i,j})_{0 \leq i,j \leq \beta} \in (-2^\alpha, 2^\alpha)^{\beta \times \beta}$ and $\mathbf{b}' = (b'_{i,j})_{1 \leq i,j \leq \mu} \in (-2^{\alpha'}, 2^{\alpha'})^{\mu \times \mu}$ of transmission dynamic fuzzy adjustment are constructed, and the transmission dynamic fuzzy adjustment and decryption algorithm is designed according to the key distribution [23–25].

3.2. Transmission Dynamic Fuzzy Adjustment Output Optimized

The feature selection model of dynamic fuzzy adjustment is established, and the fuzzy combination control in the process of dynamic fuzzy adjustment is realized by using the method of fuzzy information cluster analysis. The key feature distribution of the dynamic fuzzy adjustment of web information acquisition data transmission is $\{\delta x_i(j_k) = x_{i,j_k} - x_{i,j} | k \in 1, 2, \dots, N_b\}$, which generates N_b N-dimensional transmission dynamic fuzzy adjustment cipher text vectors, thus constituting the key feature distribution matrix of the dynamic fuzzy adjustment of web information acquisition data transmission:

$$\mathbf{B}_{x_i} = (\delta x_i(j_1), \delta x_i(j_2), \dots, \delta x_i(j_{N_b}))^T \quad (18)$$

By using the fuzzy adaptive optimization control method, the output transformation control and adaptive optimization of the dynamic fuzzy adjustment of web information acquisition data transmission are carried out, and the results are as follows:

$$(\mathbf{J}_{x_i}^{(1)})^T = \mathbf{B}_{x_i}^+ \mathbf{B}_{x_i}^{(1)} \quad (19)$$

Based on the above analysis, the dynamic fuzzy adjustment of web information acquisition data transmission can be carried out to improve the anti-attack and interference ability of data output. The data output structure and adaptive schematic diagram are shown in Figure 6.

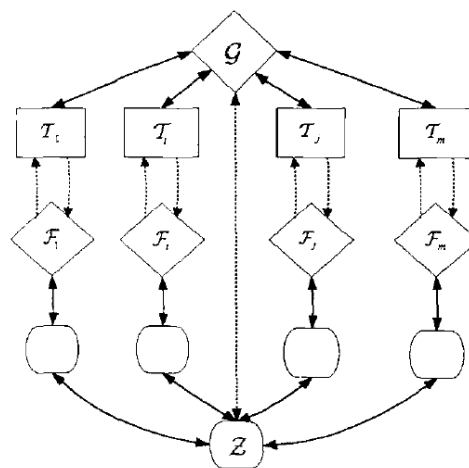


Figure 6. Schematic diagram of data output structure and self-adaptation.

4. Simulation Test Analysis

In order to test that application performance of the method in the dynamic fuzzy adjustment of the optimization transmission of web information acquisition data, a simulation test analysis was carried out and a bit transmission sequence of the dynamic fuzzy adjustment of the data transmission of web information was established. Here, the length of the transmission dynamic fuzzy adjustment bit sequence was 1600, the time length of the sampling of the web information acquisition data was 12 s, the iteration length of the transmission dynamic fuzzy adjusting key control was 400, and the web information acquisition data of the dynamic fuzzy adjustment to be transmitted is shown in Figure 7.

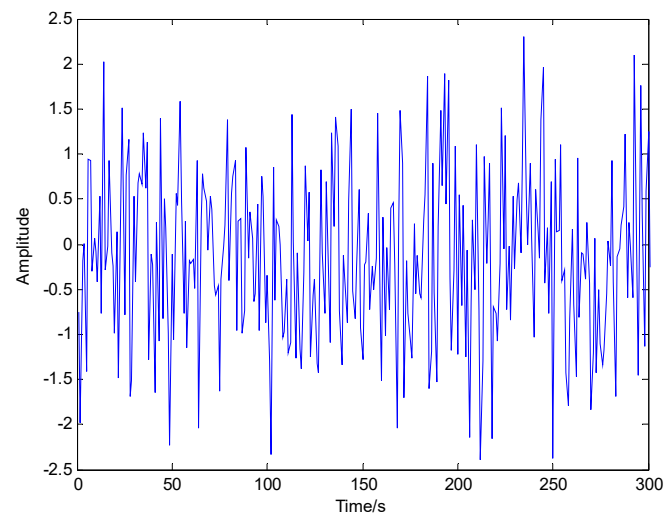


Figure 7. Dynamic fuzzy adjustment of Web information collection data and transmission.

Taking the web information acquisition data of Figure 3 as the research object, the dynamic fuzzy adjustment of data transmission was carried out, and the feature selection model of the dynamic fuzzy adjustment of web information acquisition data transmission was constructed. The fuzzy combination control of feature fuzziness in the process of the dynamic fuzzy adjustment of web information collection data transmission was carried out with the fuzzy information clustering analysis method, and the dynamic fuzzy adjustment of data transmission was realized; the transmission dynamic fuzzy adjustment output is shown in Figure 8.

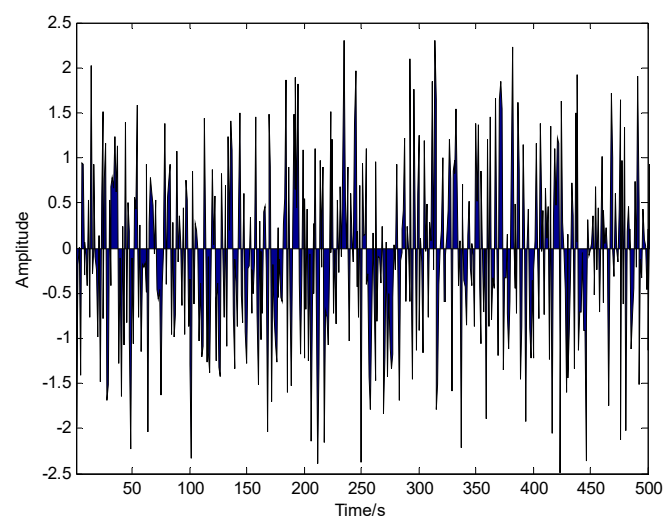


Figure 8. Web information acquisition data transmission dynamic fuzzy adjustment output.

Figure 8 shows that the dynamic fuzzy adjustment output of web information acquisition data transmission by using this method was better, thus improving the confidentiality of the dynamic fuzzy adjustment output of web information acquisition data transmission. Next, according to different dynamic fuzzy adjustment web information collection data transmission methods, discusses its security. The comparative results of these experiments that took the anti-attack degree of the output as a test index are shown in Table 1, and the analysis showed that this method had better accurate transmission ability and better performance than the traditional method for the dynamic fuzzy adjustment of web information acquisition data transmission.

Table 1. Comparison of the anti-attack degree of transmission dynamic fuzzy adjustment.

Iterations	Proposed method	Reference [4]	Reference [5]
100	0.935	0.846	0.854
200	0.978	0.865	0.857
300	0.967	0.889	0.875
400	0.996	0.923	0.888
500	0.998	0.934	0.916

5. Conclusions

In this paper, a feature selection algorithm was used for the dynamic fuzzy adjustment of data transmission in the web, and a vector quantization coding process in the dynamic fuzzy adjusting process of the data transmission of the web was carried out by using a hybrid sequence structure. The non-linear correlation feature quantity of web information acquisition data was extracted, feature selection in the dynamic fuzzy adjustment process of the data transmission of web information acquisition data transmission was carried out by adopting the statistical characteristic detection method, and a feature selection model of the dynamic fuzzy adjustment of the data transmission of web information was constructed. The characteristic ambiguity combination control in the dynamic fuzzy adjusting process of the data transmission of web information was carried out with the fuzzy information clustering method, and the dynamic fuzzy adjusting design of the data transmission of web information was carried out according to the fuzzy characteristic matching result. By using the random linear encoding and decoding method, the data transmission of network information is dynamically fuzzy adjusted and the decryption key is designed, and the dynamic fuzzy adjustment and optimization of the data transmission of web information acquisition data transmission were realized. The result of the analysis was that the output of the dynamic fuzzy adjustment of the web information acquisition data transmission was better than that of the web information acquisition data transmission.

Author Contributions: H.P. and S.Y. constructs the key transfer protocol of the dynamic fuzzy adjustment of web information acquisition data transmission, H.P. and Q.L. (Qiong Liu) presents a dynamic fuzzy adjustment method of Web information collection and data transmission based on autocorrelation feature matching, H.P., Q.P. and Q.L. (Qiao Li) did the experiments, recorded data, and created manuscripts. S.Y., and Q.L. (Qiong Liu) writing—review and editing. All authors read and approved the final manuscript.

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