

CONSTRUCTING TRI-TOPOLOGICAL NETWORK SPACE MODEL USING CONNECTED COMPONENT GRAPH THEORY (T3-C2G) BASED ON HOMOTOPY ALGEBRAIC INVARIANCE MODEL

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ABSTRACT. The complex network contains non-deterministic topological spaces under an invariance structural approach to create failures on a continual link during communication. The non-lineardynamic topological structure leads to problematic threading links on network nodes due to a non-identical path to route the data. To resolve this problem, we propose atri-logical algebraic mathematical construction model called homotopy based tri-topological network space using connected component graph $(T^3 - C^2G)$ under network non-linear structure, The Algebraic Invariance Linear Queuing Theory (HA/I/LQT) is used to resolve the link failure route propagation to make improved communication performance. This homotopy reduction to reduce the complex nature to make continual link based on Quillen topological structure space under the covariance tri-topological structure. Further, this makes tri-logical structure resembles the sequence of triangle structured route space to make the nearest point of node adjustment from the nearest path. This balances the M/M/G- T^3 -Max queuing theory on triangular weightage in routing schemes to specify the dynamic homotopy topological structure to make continuous routing links to reduce the complex nature of network routing.

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1. INTRODUCTION

This paper contributes to the homotopy based network topological construction model to reduce the complex nature of a dynamic network. Firstly, We modified the traditional architecture of the single network control unit to set up the shared control plane Killen architecture to achieve integration of multiple controller units into multiple control devices. Secondly, we have started the homotopy structures of M / M in theoretical sequences in space. We have reviewed the algorithms that are distributed based on the reconfiguration of tri-logic structures, and the effective implementation and termination of shared control aircraft. Then, there has been dual-track construction in the diversion network using examples of homotopy shared control plane [2, 3] in two stages of progression and optimization through the triangular plane phase. Finally, we have proved that our preparation strategy is superior to traditional routing techniques to give simulation results.

2. PROBLEM DEFINITION

- Leading the problem of computing homotopy in the network is the shortest path in the presence of failure node-link obstacles in the topology plane.
- The communication point on topological space remains the topology structure created singular dimensional edge construction to create a network link led unstructured path
- Most of the edge pointed homotopy created non-simple paths achieves $O(\log 2n)$ time per output vertex which is complex by a factor of $O(n / \log 2n)$ because of the route leads.
- The non-topological space doesn't pose a dynamic queuing model where two paths with common endpoints, in the presence of obstacles, are homotopy, which is complex to create node-link in the same way the new topology construction is done.
- The endpoint created an unstructured equivalence that computing shortest homotopic paths is expensive for testing homotopy since the shortest path can have quadratic failure links.

3. THE OBJECTIVE OF THIS PAPER

- To design a new tri-logical homotopy dynamic routing frame-work for network topology construction with a remaining shortest path with a modest state to improve the communication.
- To implement an $M/M/G - T^3$ -Max homology against non-constructed Homotopy types of different paths which can be used to improve elastic routing.
- To propose the lightweight triangular homotopy pathway using a connected component graph model to produce the logical homotopy type as the shortest path to extend the program control.
- Our key insight is that the packets are in a triangular order, and communication is always injected into the next triangle to travel more frequently.
- Using quadratic construction to reduce the overflow packet which is implemented in a coarse triangle and has two levels of work. The bottom level is used to represent the top-specific homotopy type when greedy routing over a triangular array for the local population. After queuing the implementation step, greedy works at two different resolutions, triangulating a specific area and creating a sub-structure of the minimum size to improve the dynamic topological structure.

4. PROPOSED SOLUTION

Definition 4.1. *To design a tri logical topological structure, let us consider a network topological structure, construct a copy of that network tree to a specific homotopy type at the edge of the support paths so that the path through the cut edges can be found on the Markov route. Each cut edge connects two vertices of T that always leaves. Let us consider that N is the number of nodes to make homotopy- H cluster to make tri-topological structure $T-l^2(N)$ begins at N number of nodes. The imaginary construction of network turns at edges T is to make resemble nodes $n \geq 1$ at $T-1$ nodes create kinks on neighbor nodes to the open end of each Neighbour cut edge. The continuity that was lost in removing the cut edges to create T is now restored with another link to cover the topological space on liner integrity to make a continuous link.*

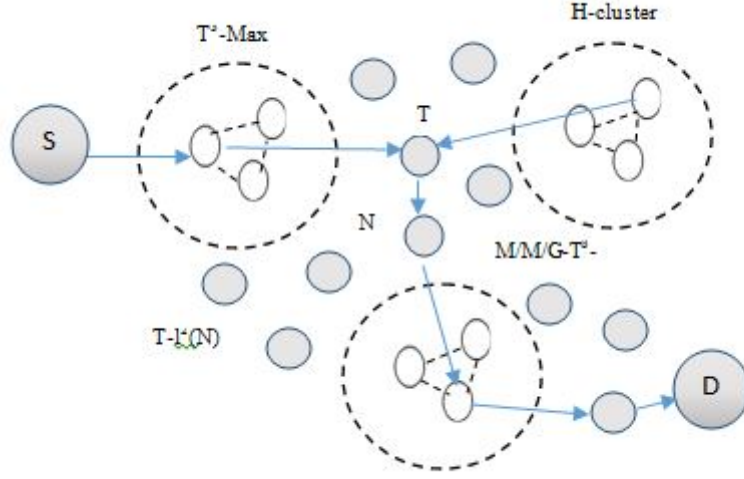


Figure 1: tri-topological network space-based Homotopy algebraic invariance model

Definition 4.2. According to the homotopy topological model, when the queuing structure of the network is active, new sources can start transmitting at any time to create a continued link, and we can rate any number of sources at the same time $P \lambda$ M-Max linear rational model. This is a further generalization of Quillen's theory model when the burst length is normally distributed in a tri-logical structure to make path sorting. In this case, the introduction of this model as a function of time fits in the evolution of the $M / G / \infty$ sorting topological structure. An $M / G / \infty$ resource is at the same time active and equipped with busy nodes in the node structure. The sequence-structure name $M / G / \infty$ is used as an alternate to make dynamic tri-logical topology.

Theorem 4.1. Let us consider a homotopy topological model on a dynamic structure on queuing state $Qt = \frac{\rho^2}{1-\rho}$ at each chain process ρ at equilibrium change state, state equalized $Lq = \frac{\rho^2}{2*(1-\rho)}$ to generalize the level of arrival state by its formulate queuing representation.

$$Lq = \frac{\rho^2(1 + C_s^2)(C_a^2 + \rho^2 C_s^2)}{2 * (1 - \rho)(1 + \rho^2 C_s^2)}.$$

Representation by the create new topological space by mean rate closest node λ and σ_a^2 inter-arrival node difference a is variance arrival rate: $C_a^2 = \frac{\sigma_a^2}{(1/\lambda)^2}$ Likewise if μ

execute service availability rate and σ_s^2 where s is service time evaluation time, $T-l^2(N)$ remains the none link chain $C_s^2 = \frac{\sigma_s^2}{(1/\mu)^2}$ the generalize the approximation as $Lq = \frac{\rho^2(C_a^2+C_s^2)}{2*(1-\rho)}$, where g is equalized max if state is max/ Min approximation, $g = \exp(\frac{-2*(1-\rho)(1-C_a^2)^2}{3\rho(C_a^2+C_s^2)}) * 2$ topological tri-structure change state, when is $C_a^2 \leq 3$, and $g = \exp(\frac{(1-\rho)(1-C_a^2)}{(C_a^2+4C_s^2)})$ limit cluster node remains, when $C_a^2 > 3$ is a triangular node, similarly, the Poisson distribution remains the intervals defining at the random state whether the continuous link has arrived in that queue to make continuous dynamic routing link on network and execution state of the queuing theory which depends on node arrival at a time.

By the queuing principles of little's theory, we construct a nonlinear structure of topological space consider.

The time interval considering the initial node construction $(0,t)$ where t is large, i.e. $t \rightarrow \alpha$.

Let constructing angular area deviated point $\alpha(t)$ and $\beta(t)$ at time $t = \int_0^t [\alpha(t) - \beta(t)] dt$.

Meantime system w waits in node change time $= \lim_{t \rightarrow \infty} \frac{Area(t)}{\alpha(t)}$.

Maen estimation of total nodes $N = \lim_{t \rightarrow \infty} \frac{Area(t)}{t} = \lim_{t \rightarrow \infty} \frac{\alpha(t).Area(t)}{t.\alpha(t)}$. Since, $\lambda = \lim_{t \rightarrow \infty} \frac{\alpha(t)}{t}$, i.e. $N = \lambda W$.

4.1. Constructed homotopy network structure.

Definition 4.3. The continuous structure starts at base point $[0, 1] \rightarrow M\ell$ is based on $(0 = \ell(1) = X^2 : X$ is based on X and some two multiple M loops with a continuous fixed base point (remains in construction at the same base point and ℓ and ℓ') when continuous function The function creates loop (relative to the base point) with the constructing points are same as closest points to real and imaginary values: $[0, 1] \times [0, 1] H \rightarrow M(0, T) = \ell(D)$, $H(1, D) = \ell'(t)$ and $H(S, 0) = H(S1) = X$ are all seconds, $d \in [0, 1]$.

The continuous loop is executed on a contract basis if it is the same on a fixed rotating body that can create another triangular rotation. X is a group of homotopy equivalents for a circle formed by grouping and grouping by a chain of $\pi_1(M, X)$ in the index. At the edge of the panel identification, edge hinges are homotopies of contract loops. The same connection space with different base points is homogeneous in group sorting.

Definition 4.4. We define a custom homotopy criterion for the 2G loop that produces group $\pi_1(M, X)$ in the homotopy class sorting. Value A based on triangular homotopy includes a set (with a common appearance) of $2(G + 1)$ in a trilogical simple closure that is multiple times in the spiral system and perpendicular to the outside of the phase. All systems in the loop are homotopy based but are inversely auxiliary in creating links with the homotopy phase structure from least squares.

Quillen theorem on the topological structure

Definition 4.5. The geometrical realization of topological structure categorizes the relational nodes in-network coverage medium in first-order derivatives $N()$ which are assigned to node \hat{A} point of occurrence. The geometric realization of node occurrence is represented as $|N()|$, the weak homotopy equivalence is N .

Definition 4.6. According to the Thomson theory, the queillen theorem concatenates the node of the neighbor category as Cat with grouped cluster galled S set. The representation of the node-set is pointed by reference to geometric realization is

$$N : Cat \rightarrow sSet.$$

From the node coverage on geometric region cat to set function is,

$$|Node| - Ts : sSet \rightarrow Top.$$

The Top represents the topological geometric space from the Thomson theorem Ts ,

$$|Node| - Ts := |N(-Ts)| : Cat \rightarrow Top.$$

Open Queuing Network

- (1) Open queue network in a common order. When the task is reached, the node has three levels on the network in the open row in a common order.
- (2) Independent space boy zone arrival λE .
- (3) Reach probability k i n n in the order of p .
- (4) With probability PII in the network loop.

Node I From the perspective, both positions are the leaf of the work.

- (1) Probability must reach node J with P_{ij} .
- (2) (Ii) Probability or P and node leave me.

SYMBOL	DESCRIPTION
i, j, k, d	Node counts initialization begin loops.
$P(i \rightarrow j \rightarrow k)$	Set i at initials point of the node, through node j to node k.
m	The number of paths to reach node j.
n	Queuing network assigned nodes in the network
N	The path contains several nodes
K	Node state
$E(k)$	Average task number in the queuing network.
$E(T)$	N points delay end at Time
γ	Entering the packet arrival rate
μ_i	The service node of i
ρ_i	Utilization of Node i.
λ_i	The average task arrival rate of node i.
λ_e	Independent external Poisson arrival.
P_{ie}	Probability of leaving the node i.
P_{ij}	Probability of from node i to node j.
$E(K_i)$	Average task number in the path i.
$E_M(T)$	Average network delay with M paths.

Theorem 4.2. *When the network in the open queue becomes constant, the speed of all tasks left by the node, the sum, is equal to that of all the tasks in the reserve coming to the node:*

$$\begin{aligned}
 [\lambda(i) + \sum_i^m \mu_i]p(k) &= \sum_{i=1}^m \lambda_e p(k - I_i) \\
 &+ \sum_{i=1}^m P_{id} \lambda_i p(k + I_i) + \sum_{i=1}^m \sum_{j=1}^m (j = 1)^m p_{ki} \lambda_k p(k + I_i - I_j).
 \end{aligned}$$

Join the probability that $p(k)$ is the constant state k can be here, the unit change of the terminal from i I to the unit vector I and J states.

Delay estimations on end to end path

Definition 4.7. *Let us assume the number of nodes aligns sorting is generated by mean delay over the network broadcast on the WSN line with a queuing delay (wait for the delay) for each line. The service μ_i be the average number of packet delay*

at the point λ_i . The application of the terminal I terms at net construction process ρ_i is given by the following equation

$$(1) \quad \rho_i = \frac{\lambda_i}{\mu_i}.$$

The transmission remains the topology space at end delay $M/M/1$ queueing models whether the nodes assigned a path constructing among the group clusters

$$(2) \quad E(T) = \sum_{i=1}^N \frac{1}{\mu_i - \lambda_i} = \sum_{i=1}^N \frac{1}{1 - \rho_i}.$$

Queuing network delay estimation

Definition 4.8. The $M/M/1$ queue attains the node initialization in the path, considers the N number of code at each packet transmission rate μ in mutual forms whether the transmission time is the delay at λ_n .

the average task arrival rate λ and packet assign at the rate γ of node newly enters into cluster network at Kn meantime. The average number $E(kn)$ of tasks in the path m equals the sum of servicing and queuing packets. $E(kn)$ can be obtained through

$$(3) \quad E(k_n) = \lambda_n T_n = \frac{\lambda_n}{\mu_n - \lambda_n}.$$

The average number of packets in a queuing network path can be obtained

$$E(k) = \sum_{n=1}^m E(k_n).$$

The relationship among the node arrival and delay at average number $E(k)$ of tasks in a queueing network is defined as follows,

$$\gamma E(T) = E(k).$$

The average network delay with M paths can be obtained.

$$E_m(T) = \frac{1}{\gamma} \sum_{n=1}^m \lambda_n T_n = \frac{1}{\gamma} \sum_{n=1}^m \frac{\lambda_n}{\mu_n - \lambda_n}.$$

We can calculate the average network delay of the sub-queueing network in WSNs.

Definition 4.9. Iterative algorithm for packet arrival rates. The data transfer between each node is mutual in the queueing network for wireless sensor networks. Therefore, the calculation of the packet arrival rate of the previous terminal can

be used as the unknown packet arrival rate of the previous compute terminal. In many practical applications and engineering experiments, we have found that the average packet attendance rate of a node is constant when the WSN node enters the steady-state. We have designed the repeats of State correlation as shown.

Theorem 4.3. We set the initial value of the network status, and then gradually adjusted our operating model, the previous packet attendance rate. Finally, the system approaches the equilibrium state.

Begin

Step 1. According to transition probability, the connection for each node was obtained in the queueing network model. External packet arrival rates λ_j^e (j is a node number of arrival node) are determined.

Step 2. Initialize total packet arrival rates λ_i^0 (i is a node number in the network) of the n nodes.

Step 3. For queue j in the queueing network, the total packet arrival rate can be calculated as follows:

$$\lambda_j = \lambda_j^e + \sum_{i=1}^m \lambda(i) P_{ij}.$$

According to the connection of each node in the queueing network model of Step 1, create the following constraints: $\lambda_j^1 = \lambda_j^e + \sum_{i=1}^m \lambda_i^0 P_{ij}$.

The next node of the packet arrival rate is calculated

$$\lambda_{j+1}^1 = \lambda_{j+1}^e + \sum_{i=1}^m \lambda_i^1 P_{ij} + \sum_{i=1}^m \lambda_i^0 P_{ij}.$$

Thus. the total packet arrival rates of nodes are calculated.

Step 4. We use λ_j^1 to amend the internal packet arrival rates for every node, where j denotes node number.

Step 5. If the difference between the internal packet arrival rates for two computing tasks (before and after) is less than a certain value, then go to Step 6. Otherwise, jump to Step 3 followed by iterative calculation.

Step 6. Return the total packet arrival rate of each node $j\lambda_j^0$ (where θ is the number of iterations).

End

Theorem 4.4. *Estimation of the path beyond the reconstruction level.*

Step 1. The connection of each node is obtained according to the transition probability of a queueing network model, as well as that of the network reaching and transferring figure.

Step 2. Packets are leaving from the node i with external arrival rate λ_i^e to node j through the queueing network. Based on the following rules, start building the search tree from node i .

Step 2.1. Node i is the root node. Step 2.2. According to the node transition relationship, add the leaf node.

Step 2.3. For sub-tree generated by non-sink node, if two node numbers, which leaf node and its parent node and sibling node of the parent node are same, this leaf node is invalid.

Step 2.4. The leaf node is deleted. Before searching the destination node j , if the non-sink node is not added, go back to Step 2.2; otherwise, go to Step 2.5.

Step 2.5. When sink node k is met, node k becomes the root of the sub-tree, go to Step 2.2 until non-sink nodes are completed to add.

Step 2.6. The sub-tree generated by sink node k is inserted into the main tree of the root as node i .

Step 3. The resulting search tree is completely traversed from the root node i . Thus, all the paths to reach node j are obtained.

Step 4. According to the node service rate as the weight, the comparison of the output paths is to remove the path with redundant nodes.

Step 5. The pre-selection paths from topology create a dynamic loop between the node i initialization to node j in a queueing network take to be output.

End

4.2. Cyclic reconstruction on network path homotopy. The structural dynamic network triangular communicational link is created by the quadratic point of topological space. Let R be a cluster group. A linear assignment of the network creates K links at a combination of oriented k -simples on network nodes, the combination point of 1 edge with constants in the cluster group R on a single queueing group in the communicational path is at another edge. The $C_k(M; R)$ forms under the K -cluster chain for topology in the linear structure data flow.

Definition 4.10. *We consider the fiction-limited buffer capacity and control and the $M / G / 1$ category sequence model as it is a combination of the principle*

(energy saving) which is the classic multi-vacation policy and the principle (N-principle) for beginners. Continuous data packets are distributed by FIFO (first, first-out) at a rate of time according to the service time discipline and according to a Poisson process and generally implemented by the overall localization function (cluster) $f(\bullet)$. Yet the chess converter (LST) is $f(K)$. The storage buffer capacity is fictional and equals $K-1$, the is K th max position all the time, so the closer node terminates the idle representation mode will start when the process is completely turned off and in order, it will be idle (pause period). That is, the specified length is equal to the continuous server vacation of T or where the total number of packets launched (and processed waiting) is greater than m and $XED1 \leq n \leq k$. If such a situation occurs, this "success" sequence is measured at the end of the response node starts with a closer node cluster.

5. SUSPENSION QUEUE-SIZE OF IDLE PERIOD

Definition 5.1. Consider the Queue F_i in the United States firstly, time initialization $t = 0$, is composed of a dynamic node certain distance of vacation, it reset it is rest period, as in the far buffer queue length (pause queue size behavior over the period) If processing RST F_i one end thereof determination as past determination $1 \leq N \leq K$., the determination given by,

$$P\{X(t) = m, t \in I_1\} = \sum_{i=1}^{\infty} P\{X(t) = m, t \in I_{1,i}\},$$

where $I_{1,i}$ term the idle representation by representing the function set A marginal set $\{0,1\}$ in successive factor,

$$1_A(x) = \begin{cases} 1, & x \in A \\ 0, & x \notin A \end{cases}$$

and let $\delta_{i,j}$ stand for delta function at the representation be formalized,

$$\begin{aligned} & P\{X(t) = m, t \in I_1\} \\ &= 1_{[(i-1)T, iT]}(t) 1_{\{0,1,\dots,N-1\}}(m) \sum_{k=0}^m \frac{(\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} \\ & \cdot e^{-\lambda(i-1)T} \cdot \frac{(\lambda(t - (i-1)T))^{m-k}}{(m-K)!} e^{-\lambda(i-1)T} \end{aligned}$$

$$\begin{aligned}
& + 1_{N \dots K-1}(m) \sum_{k=0}^{N-1} \frac{\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} \frac{\lambda(t - (i-1)T))^j}{(m-K)!} e^{-\lambda(i-1)T} \\
& + \delta(m, k) \sum_{k=0}^{N-1} \frac{\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} \sum_{j=k-K}^{\infty} \frac{\lambda(t - (i-1)T))^j}{j!} e^{-\lambda(i-1)T}
\end{aligned}$$

Indeed, if $t \in I1$, i then $t \in [(i-1)T, iT)$. Indicates the situation where the first enrollment limit with the right Fi has not been reached before N Time D . Second, there should be an $N-1$ equivalent number of visits (apparently) to achieve the minimum $(n-1)$ number of pockets at the time $(n \text{ time } t \text{ to reach the minimum in the queues at } t \text{ time } t)$. Besides, but the buffer will still be saturated) to start the e -vacation. Finally, the right describes the situation by filling the buffer at the last joint t time. Before we mention LT Concept, $P\{X(t) = m, t \in I1, i\}$, let us observe that for $s > 0$ we have

$$\begin{aligned}
& \int_{(i-1)T}^{iT} e^{-(s+\lambda)t} \frac{(\lambda(t - (i-1)T))^j}{j!} dt, \\
& \int_0^T e^{-(s+\lambda)[u + (i-1)T]} \frac{(\lambda u)^j}{j!} du = e^{-(s+\lambda)(i-1)T} \frac{\lambda^j}{((s+\lambda)^{(j+1)})} (s+\lambda)^{(j+T)}.
\end{aligned}$$

Here $E_{s+\lambda}(j, \bullet)$ denotes the CDF of the j -Erlang distribution with parameter $s + \lambda$.

Referring to (1)-(3), we get now for $s > 0$,

$$\begin{aligned}
p_I(s, m) &= \int_0^\infty e^{-st} P\{X(t) = m, t \in I_1\} dt \\
&= \sum_{i=1}^\infty e^{-(s+\lambda)(i-1)T} 1_{\{N, \dots, K-1\}}(m) \cdot \sum_{k=0}^m \frac{\lambda^{m-k}}{(s+\lambda)^{m-k+1}} \\
&\quad \cdot \frac{(\lambda(i-1)T)^k}{K!} (s+\lambda)^{(m-k, T)} + \sum_{k=0}^{N-1} \frac{(\lambda(i-1)T)^k}{K!} \\
&\quad \cdot [1_{\{N, \dots, K-1\}}(m)] \frac{\lambda^{(m-k)}}{(s+\lambda)^{m-k+1}} (s+\lambda)^{(m-k, T)} \\
&\quad + \delta_{m,k} \sum_{j=K-k}^\infty \frac{\lambda^j}{((s+\lambda)^{j+1})} (s+\lambda)^{(j+T)}.
\end{aligned}$$

6. QUEUE MEASUREMENT AT THE IDLE PERIOD COMPLETION EPOCH

Definition 6.1. *The probability distribution of the queue state $XIr = XI$, Denoting the running node topology behind the idle time of cluster at arbitrary position whether the node is arrived at the meantime at in not responding the named be omits at the cluster group*

$$\alpha = P\{X_1 = n\}, n \in \{N, \dots, K\}.$$

The idle period of node response is valid otherwise terminates at periodic contact of a stable state,

$$\begin{aligned} a_n &= \sum_{i=1}^{\infty} P\{X(iT) = n, \text{ idle period contains exactly } i \text{ single vacations} \} \\ &= \sum_{i=1}^{\infty} 1_{(N, \dots, K-1)}(n) \sum_{k=0}^{N-1} \frac{(\lambda(i-1)T)^k}{K!} e^{-(\lambda(i-1)T)} \\ &\quad \cdot \frac{(\lambda T)^{n-k}}{(n-k)!} e^{-\lambda T} + \delta_{n,k} \sum_{k=0}^{N-1} \frac{(\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} \\ &\quad \cdot \sum_{j=K-k}^{\infty} \frac{(\lambda T)^j}{j!} e^{-\lambda T}. \end{aligned}$$

Sums the right way to $RST \rightarrow Fi$, the buffer is fitness of Fi , one of the second valid Q packets after the idle period, before the idle period and when the processing starts is not present.

Definition 6.2. *Idle Period Duration, in this segment, deprived of vast of new nodes dynamic arrival the network be cluster into varying node heads at iT in regulation process p ,*

$$PI_{(r)} \geq iT = \sum_{k=0}^{N-1} \frac{(\lambda(i-1)T)^k}{K!}, \quad r = 1, 2, \dots$$

The accumulated packet on trans, m , in the node structure terminates the new structure based on the idle time $T(i-1)$ at connecting links in $N-1$ to get 5 the closest node.

$$\begin{aligned} P\{Ir = IT\} &= P\{Ir \geq IT\} - P\{Ir \geq (i+1)T\} \\ &= \sum_{k=0}^{N-1} \frac{(\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} - \frac{(\lambda iT)^k}{(k)!} e^{-\lambda iT}. \end{aligned}$$

Depending the $f_I(\bullet)$ creates the mean time of new node arrival duration be represented as $f_1(s) = (P\{I_{(r)} = (i+1)T\} - P\{I_{(r)} = iT\}) \sum_{i=0}^{\infty} e^{isT}$,

$$\sum_{k=0}^{N-1} \left(2 \frac{(\lambda iT)^k}{(k)!} e^{-\lambda iT} - \frac{(\lambda(i+1)T)^k}{K!} e^{-\lambda(i+1)T} - \frac{(\lambda(i-1)T)^k}{K!} e^{-\lambda(i-1)T} \right).$$

By analyzing the network boundaries, get least clusters $\partial k : Ck \rightarrow Ck - 1$ by pointing the closest neighbors of node consisting continuous link in K-cycle. This supports the K number of dynamic topology with K boundaries. The dynamic boundary exceeds the node of dependencies at (K+1) cycles. The Kth homotopy creates subgroups to find the least distance by dividing the group at Z_k and B_k subgroups. This creates an equivalent path to improve the topology made the connection between the complex changing nodes. To this extent, the tri-logical secretes the logical path. The logical path contains the continuous link to provide a logical structural network structure which makes efficient topology.

7. CONCLUSION

The Network surface properties of algebra and homotopy vary based on the structural probabilities to make the least expression and identification. To conclude, this tri-logical homotopy reduces thenetwork structure through the outside of the decay phase from dynamic topology. There are two types of computation proposed in connection with decay subspaces connections. Separation Eve space is derived from the base space with basic groups and separation from the phase space. Interestingly, the intersection homotopy proposed under the Eve map extends into the topological space within the decay ewe phase, retaining the self-clear group of fracture topological gaps. The topological space is symmetrical concerning the appearance of a point expansion. Besides, deformed homotopy is the number of infinite cycles of circular generators in the deformed ewe phase intervals group where there is an open path component connected to the homotopy class internally. The proposed tri-logical structure improves the path construction in the network to enhance communication.

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