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Governance of distressed areas regeneration program of Tehran with network approach

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Abstract

The distressed areas and improvement of living atmosphere is one of the complex and multi-dimensional subjects in the field of urban design and management. Considering the importance of this subject, so may laws and policies have been issued by governments and policy makers; however, a significant improvement has not been observed in this filed. One of the reasons for the lack of development is the multi expertise nature of the regeneration programs and the diversity of projects along with the different stakeholders from private and governmental institutions that need complex coordinating plans. In the other words, the regeneration of deteriorated areas has the attitudes of a program, which a network of stakeholders have essential roles in its achievements and one of the important issues for reaching the end points of the program is governance of these stakeholders. Therefore, recognizing the structure of the stakeholder networks' governance and criticizing it can lead to the success of these programs. As one of the most important aspects of the regeneration programs' governance is the collaboration between nodes, this article has quantified the degree of the collaboration between nodes of the stakeholders' network of Tehran regeneration program by using the focus group method. Then the results have been used as the date for Social Network Analysis (SNA) method which is a great program for analyzing the different aspects of the networks. Then by using SNA, the degree of collaboration of Tehran regeneration program's governance network is identified and is compared to the ideal form of collaborative governance structure introduced in the literature to make some suggestion for making the improvements.

Keywords

Regeneration of deteriorated areas, Social Network Analysis, Collaboration, Network.

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Introduction

A large part of urban construction projects involves plans for regeneration of deteriorated areas of urban fabrics. These projects are becoming increasingly important considering the wave of transformation in cities and inconsistency of traditional cities with the necessities of today's world. Under similar conditions, Iran has no choice but to devise and enforce a wide range of regeneration projects. The problems of a metropolitan area are caused by transformation over time. The issues arising from such transformation are not only physical problems such as unoccupied lands and abandoned buildings, but also are social, such as unemployment and social exclusion (Hassan, 2012). There is a vital need for solving each problem through different organizational and individual specialties and social responsibilities.

Regeneration of inefficient urban buildings as a plan for such transformations facing different problems requires a coordinated effort by actors from different organizations with different or even conflicting goals. The point about these actors is the diversity in structure, ownership, management, goals, and missions. This includes government agencies with centralized and bureaucratic structures pursuing state missions and task management, NGOs with council structures and nonprofit missions, and private-sector companies with centralized management and for-profit missions. Public-sector organizations with service missions and semi-council structures such as municipalities playing an important part in realizing the regeneration project objectives. In addition, natural individuals, in the forms of contractors, local trustees, micro investors, etc., have significant influence on the practical process of regeneration projects. This kind of stakeholder organization can be called a network because, based on Achrol's theory, network is a kind of organization in which a large number of specialized organizations are interlinked in a cooperative and collaborative communication. According to Achrol, the network describes a wide range of elements including national economic

systems and international cooperation on the one hand, and small entrepreneurship firms, service providers, professional and specialized networks, information and communication systems and social networks, on the other hand. Meanwhile, every organization includes an internal network of power, functions, communications and exchanges. Moreover, every organization must interact with other organizations to obtain resources and legitimacy for survival and growth (Achrol, 1997).

The performance orientation of service sector has shifted the focus of theories towards management of networks and their performance. At the same time, numerous theories developed by Mandell, Agranov, McGuire, Meier, and O'Toole made remarkable progress including a distinction between conventional management and network management (Meier and O'Toole, 2005) (McGuire, 2002) (Agranoff and McGuire, 2001) (Mandell, 1994). Furthermore, the experimental findings of Meier and O'Toole were adopted to model the impact of network management on network performance (Meier, et al., 2002). The configuration of the network theory was created by expanding these foundations. This configuration consists of a set of factors including goals, strategies, governance type, structure, individuals and management and states that the overall network effectiveness depends on internal alignment of those factors along with coordination of network content and configuration (Raab and Suijkerbuijk, 2009).

Therefore, one of the important issues about these projects revolves around management and governance of the network of stakeholders. Many researchers point out that governance paradigm of networks is an improvement in government organizations and organizational theories since it provides a means by which problems can be solved through multidimensional and flexible methods (Koppenjan and Klijn, 2004) (Goldsmith and Eggers, 2004, Sørensen and Torfing, 2007).

The question arises in this respect is: What governance structure enables the main (e.g. Ministry of Housing and mayors) or elected administrators to handle

regeneration projects given the multidisciplinary of such projects and engagement of various actors? (Projects that require the coordinated and aligned efforts of different and independent organizations, individuals and institutions, many of which have no obvious contractual and hierarchical connections to regeneration practitioners)

To answer this basic question, first it is essential to cover the following two sub-questions:

- What are the characteristics of regeneration of deteriorated urban fabric of Tehran and what can be its best governance structure?
- What is the current governance structure for regeneration plan of deteriorated urban fabric of Tehran, and to what extent it differs from the ideal structure?

Since there are no systematic studies on governance of such plans in the context of Iranian architectural regeneration, this review paper first examines the relevant literature on the global optimal governance of regeneration plans, identifying the characteristics of a network of public and private participation. At the next stage, the achievements of social network analysis are employed to explore the current status of regeneration plans in Tehran, while comparing it to the optimal situation.

Research Background and Theoretical Foundations

A: Regeneration of Inefficient Urban Fabric

Regeneration is simply derived from terms renovation or rehabilitation, which serve to restructure and renew the urban economy in line with social equality and social interactions. Urban regeneration is a comprehensive and integrated vision and an act towards solving urban problems and lasting economic, physical and environmental improvement of the region subject to transformation (Hassan, 2012); (Roberts, 2000).

Regeneration of deteriorated urban fabrics requires coordinated and aligned efforts of actors from different organizations with different or even conflicting goals. As one of the most important

institutions involved in regeneration of deteriorated urban fabrics, government has a duty to support, direct, and oversee the preparation of renovation projects through the Ministry of Housing and Urban Development and other public agencies. In this regard, Article 111 of the Municipal Act and Article 1 of Civil Construction and Renovation Code states that urban renovation is one of the duties of municipalities. In order to carry out this task, municipalities are required to renovate and rehabilitate deteriorated urban fabrics. In addition, Urban Development and Revitalization Organization of Iran (parent company), the brokerage of civil engineering and housing companies, play other supporting roles and is in charge of provision of government facilities. This company is administered as joint stocks under the Ministry of Housing and Urban Development (Bavand, 2003).

Other government agencies responsible for intervening in inefficient fabric include:

- Cultural Heritage, Arts, and Tourism Organization, overseeing inefficient fabric regeneration projects with historical value
- Provincial infrastructure and utility services such as regional power, water and sewage, gas, telecommunication companies and other infrastructure and urban utility facilities
- Institutions providing basic services such as the Ministries of Health, Education, Culture and Islamic Guidance and Sports Organization

There are a number of private-sector actors involved in regeneration, including:

- Urban developers, mass construction engineers and so on.
- Offices of public renovation facilitation services
- NGOs
- Inhabitants of the inefficient fabric

Therefore, people are involved in such contributions as beneficiaries in addition to investors, lenders, and companies offering construction and operation services in the private sector and government policy-makers in the public sector. These actors devise and orchestrate public and private partnerships

projects and establish the policies (Chowdhury , et al., 2011). Hence, one of the most prominent features of regeneration projects is the multiplicity of stakeholders and different levels of execution influenced by different requirements (Klijn , et al., 2015) (Shaoul , et al., 2012) (Edelenbos and Klijn, 2009). According to previous research results, the traditional governance practices, including market dominance, seem barely desirable for such large-scale projects involving numerous stakeholders (Ruuska, et al., 2011, Chowdhury, et al., 2011) (Keast and Mandell, 2013, Ruuska, et al., 2011).

One of the key ideas behind establishment of such partnerships is that these organizations need to have an arm's length communication with entities under their supervision in order to solve the challenges of modernization projects. A closer look into the subject matter in relevant literature on networks and partnerships, however, indicates that Clayne and Kurt stated that proximity of organizations (arm's length contracts) does not affect their performance, while the adoption of multiple, collaborative governance strategies can influence the performance of these organizations (Kort and Klijn, 2011).

B. Collaborative Networks

The need for collective activities has become a serious issue for managers and researchers alike. However, it is difficult to recognize the extent of attention paid to the subject matter because of numerous terms used in this regard. Many scholars use collaboration or collaborative arrangements when discussing networks (Wood and Gray, 1991). Wood and Gray (1991) define collaboration as follows: "A group of independent stakeholders engage in an collaborative process on a specific issue under rules, norms and structures shared to perform or decide on that particular issue." According to Ronald Ireland, engagement is far simpler in words than practice, but in the current business environment, organizations need to collaborate to achieve common goals (Ireland and Crum, 2005).

Mates and Afsarmanesh define collaborative networks (collaborative organization) as follows:

"A collaborative network is composed of different units (e.g. individuals or organizations) which are completely independent, geographically dispersed, and heterogeneous in terms of executive environment, social capital and goals. Nonetheless, these units collaborate to better achieve common goals or consistent goals supported by computer networks." Unlike other networks, there is an intrinsic feature in collaborative networks arising from the belief shared among the members on the basis that, "network members will achieve goals that could be impossible or too costly by individual organizations through collaborating with each other." (Camarinha-Matos, et al., 2005). The main difference between collaborative networks and other networks is that the former, unlike other networks which are independent and autonomous organizations with weak and sometimes even competitive relationships, tend towards more complex and close reciprocal interdependence and more coherent relationships, so that members are involved in changing the system (Keast , et al., 2007, Keast, 2003). Rubin & Keast and Mendel define three levels of cooperation networks in the realm of public organization. On this basis collaborative network are in the third level:

- Cooperation: This type of cooperation is characterized by establishment of short-term, often informal, and widely voluntary relationships among individuals or organizations. In this type of relationship, participants may share information, work space, and referrals with each other. However, organizations remain independent and make little effort to set common goals. This relationship is based more on information sharing, low resource aggregation, and low power relations and with low risk.
- Coordination: It implies utilization of more powerful and formal relationships connecting the components of a system. Coordination involves engaging a level of strategy and activities involving not only information distribution but also joint planning, decision-making, policy-making, and joint

plans and projects. For this reason, coordination is realized when there is need for better harmony between individuals, activities, and systems to achieve a predefined goal or mission.

- **Collaboration:** It is usually more stable and longer based on a high level of dependency and stronger relationships. This implies that although interacting organizations are recognized as independent, they have to be viewed from as affiliated organizations, each of which performs dependent on others (Mandell and Keast, 2009)

Evidently, collaborative networks are not a “common business”. These networks have expanded based on a set of social communication components (Keast and Mandell, 2014). These social resources must be strategically controlled, influenced, and managed to achieve the goal of transformation.

In the latest accomplishments concerning the theory of collaborative networks, it is argued that collaborative networks will attain their maximum potential through managerial and strategic achievements broader and more comprehensive than other forms of networks.

C. Interactive Governance

The comprehensive research by Driessen et al. (2012) can clarify the concept of collaborative governance serving to provide a framework for governance models. Based on functions and relationships between government, market, and civil society, this study proposed five governance models, including centralized governance, decentralized governance, public-private governance, interactive governance and self-governance (Driessen, et al., 2012):

In the centralized governance model, similar to the decentralized governance model, the government agencies are the main or only actors. In this model, local/regional governments are leading, while market and civil society are the recipients of incentives provided by that sector.

Governance arrangements can also be identified on the basis of joint efforts made by the parties in the private and public sectors. In a scenario where cooperation is mainly between government and market actors, the type of governance can be called

public-private. Governance takes the interactive form in a wider domain of governance where actors from the public sector, market, and civil society cooperate under equal conditions. In these governance models, there are independent boundaries between civil society and market predetermined by the central government. Moreover, in this governance model, the market and civil society actors might be looking to achieve their goals through private investments and activities. In this case, although market and civil society actors enjoy autonomy and can initiate their new approaches, there are always certain regulations imposed by the central government in their cooperation (Driessen, et al., 2012).

The fifth model, which is defined as self-governance, may not exist in its pure form in reality. In their analysis, however, researchers present this model to complete the spectrum of governance as a simple representation of very complex social arrangements (Driessen, et al., 2012).

In Table 1 the characteristics of each governance model have been listed based on the following key features.

Methodology

The exploratory mixed method approach is used in this study. At the first stage by using the focused group methodology, the experts who are involved in the regeneration program gave their comments about the level of collaboration and cooperation between actors of Tehran regeneration programs' network was measured. The focused group method is a qualitative research method which gathers qualitative-comparative data about a group of people's opinion regarding a specific subject or phenomena. In this method about 6-12 people participate in each group who are selected intentionally by the researcher. For every research using this method more than one group are considered to enhance the research validity. In addition, it is important to select the similar and with same position participants for each group to prevent people from hesitating to give their real idea (Bazargan, 2016).for analyzing

Table 1. Governance models and their main characteristics. Source: Driessen, et al., 2012.

		Centralized governance	Governance Decentralized	Governance Public-private	Interactive governance	Self-governance
Characteristics of Actors	Initiating actors	Central gov't agencies (or supranational bodies)	Gov't at its various levels of aggregation (subsidiarity)	Central gov't agencies; private sector is granted a preconditioned role also	Multiple actors: gov't, private sector and civil society	Private sector and/or civil society
	Stakeholder position	Stakeholder autonomy determined by principal agency	High likelihood of stakeholder involvement	Autonomy of market stakeholders within predetermined boundaries	Equal roles for all network partners	Self-governing entities determine the involvement of other stakeholders
	Policy levels	(Supra)national state	Lower levels of gov't	Local to international level	Multiple levels	Local to international level
	Power base	Coercion; authority; legitimacy (democratic representation at the national level)	Coercion; authority; legitimacy (democratic representation at lower levels)	Competitiveness (prices); contracts and legal recourse; legitimacy (agreement on relations and procedures)	Legitimacy (agreement on roles, positions, procedures and process); trust; knowledge	Autonomy; leadership; group size; social capital; legitimacy (agreement on relations and procedures)
Institutional features	Model of representation	Pluralist (popular (supra)national election and lobbying))	Pluralist (popular local election and lobbying)	Corporatist (formalized public-private governing arrangements)	Partnership (participatory public-private governing arrangements)	Partnership (participatory private-private governing arrangements)
	Rules of interaction	Formal rules (rule of law; fixed and clear procedures)	Formal rules (rule of law; fixed and clear procedures)	Formal and informal exchange rules	Institutions in its broadest form (formal and informal rules)	Informal rules (norms; culture); self-crafted (no imposed) formal rules
	Mechanisms of social interactions	Top down; command and control	Sub-national governments decide autonomously about collaborations within top-down determined boundaries	Private actors decide autonomously about collaborations determined boundaries	Interactive: social learning, deliberations and negotiations	Bottom up: social learning, deliberations and negotiations
Features concerning content	Goals and targets	Uniform goals and targets	Uniform and level specific goals and targets	Uniform goals; targets actor specific	Tailor-made and integrated goals and targets	Tailor-made goals and targets
	Instruments	Legislation, permits, norms and standards	Public covenants and performance contracts	Incentive based instruments such as taxes and grants; performance contracts	Negotiated agreements; trading mechanisms; covenants; entitlements	Voluntary instruments; private contracts; entitlements; labelling and reporting
	Policy integration	Sectorial (policy sectors and levels separated)	Sectorial (policy sectors separated)	Sectorial (branches and industries separated)	Integrated (policy sectors and policy levels integrated)	Sectorial to integrated (depends on problem framing by communities of interest)
	Policy-science interface	Primacy of generic, expert knowledge	Primacy of generic expert knowledge; room for issue and time-and-place specific knowledge	Dominance of issue and time-and-place specific knowledge; expert and lay (producers and consumers)	Transdisciplinarity: expert and lay knowledge in networks; emphasis on integrated and time-and-place specific knowledge	Dominance of issue and time-and-place specific knowledge: expert and lay (citizens)

the data Social network Analysis (SNA) method was used. In social network analysis technique, the communication pattern between nodes (network members) is the subject of the study. These nodes

can be individuals, organizations or different units linked by one or more subjects. The selection of nodes that would be in the network is a decision made in the early stages of network analysis and it is

one of the main challenges in this regard (Alexandra and Wellman, 2009). In this research the nodes of Tehran regeneration program's network nodes were recognized through investigating the related official documents. Once the nodes are specified, the type of relationship between them must be selected. This relationship can be defined in the form of interaction, friendship, business relations, flow of resources, etc. (Alexandra and Wellman, 2009). In this research, the type and level of relationship was considered to be collaboration.

Data Collection and Analysis

In this section, the social network analysis method was employed to determine the dominant governance structure in organizations and institutions related to regeneration plan of inefficient urban fabric based on collaboration between organizations. This will reveal in what level of governance models provided by Driessen et al. (Table 1) the governance of Tehran regeneration program's stakeholder network will fall under.

This paper studies organizations listed below as contributors to the regeneration plan by referring to several documents and pieces of evidence as well as the reviews provided in the previous sections:

- Renovation Organization
- Local municipalities
- Local renovation offices
- Investor and builder
- Local residents and communities
- Cultural Heritage
- NGOs
- Supporting organizations (Behzisti, Relief Committee)
- Infrastructure responsible organizations

Relevant data were collected through focus groups method to create the regeneration governance network collaboration model for Tehran. Thus, the collaboration of each organization with other organizations was evaluated by holding three meetings involving various stakeholders, including users, manager of local offices, and municipality and

renovation directors. The value scale was defined based on the definition of Keast et al. (Keast, 2003, Keast, et al., 2007) in which three levels of cooperative networks are identified in the realm of public organizations, as mentioned in the relevant literature:

- Cooperation
- Coordination
- Collaboration

Thus, participants in the focus groups were asked to score the cooperation between any two organizations or stakeholder entities involved in the regeneration plan on a scale of 1 to 3. The resulted matrix was then used as an input for Ucinet¹. Using the raw matrix data, Ucinet plotted the communication network between organizations in terms of collaboration (Fig. 1). The number specified on each relationship indicate the level of cooperation between the two nodes based on raw data. Finally, the network analysis tools was employed to identify the extent of relative collaboration of each organization in the network. The results are listed in Table 2.

Program. Source

Based on network analysis, the network-level collaboration does not seem to be uniform. In fact, UDRC, Renovation Organization, local municipalities and local renovation offices have the highest collaboration levels with other organizations in the network. This could be due to involvement of a governance hierarchy between these institutions and the fact that these organizations have greater decision-making power and authority. Nonetheless, given the public and private nature of regeneration plans, local residents and private-sector builders are expected to be in a greater contact with decision-making bodies. A comparative overview of the current situation versus the desirable situation can be provided according to network analysis. Given the concentration of collaborations in public organizations it can be argued based on the categorization of Driessen et al. (Table 1) that there is a decentralized governance in which public sector entities make decisions based on laws

Table 2. Relative collaboration matrix of organizations involved in Tehran regeneration. Source: authors.

Organization	Relative degree of collaboration
Urban Development and Revitalization Company (UDRC)	1.11
Renovation Organization	1.22
Local municipalities	1.44
Local renovation offices	1.33
Investor and builder	0.55
Local residents and communities	0.88
Cultural Heritage	0.88
NGOs	0.77
Supporting organizations (Behzisti, Relief Committee)	0.66
Infrastructure responsible organizations	0.66

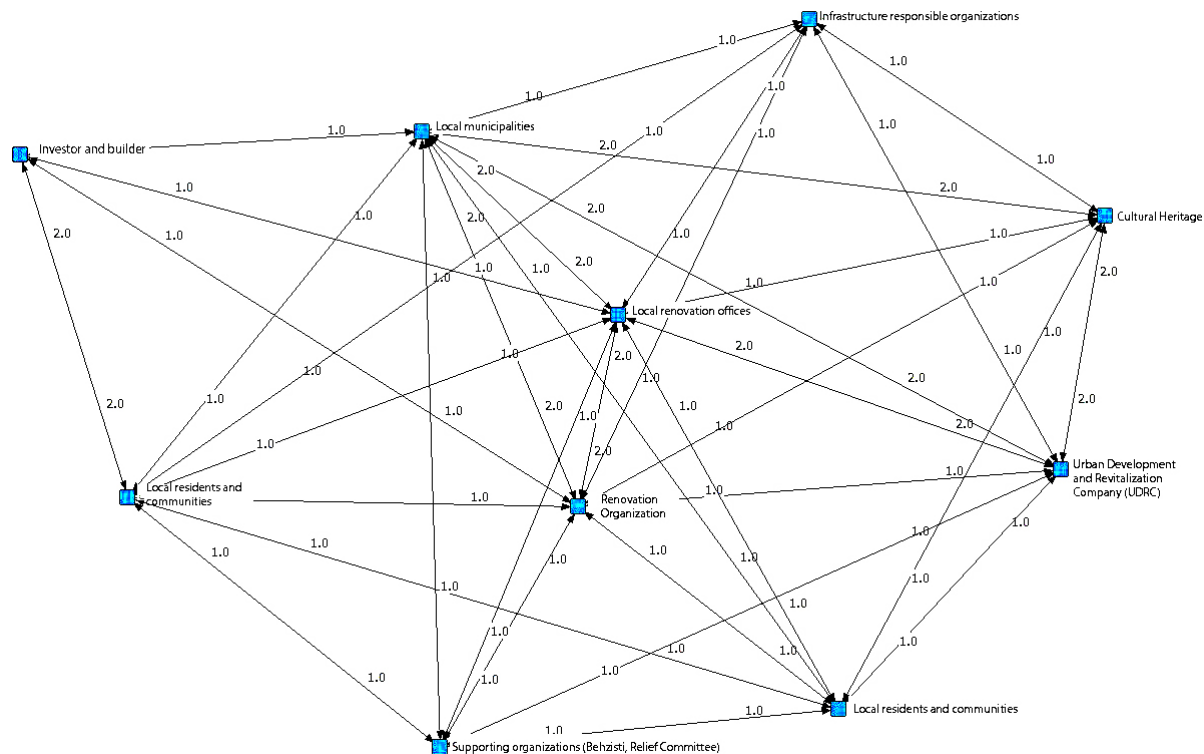


Fig. 1. Collaborative network of Tehran regeneration program’s stakeholders. Source: authors.

and contracts in neighborhoods and cities. This type of governance is far from the interactive governance favorable to the network of regeneration programs involving numerous stakeholders and projects. As noted by Ruuska, given the increase in the number of spatially dispersed projects with the participation of individuals from different organizations,

regions and cultural differences, the traditional governance practices do not seem to be adequate for renovation projects for deteriorated urban fabric. As a result, a better governance and administration should be achieved by providing a crystal-clear definition of governance model in the realm of project management science (Ruuska, et al., 2011).

Discussion and Conclusions

The renovation projects of inefficient urban fabric has been considered by the Iranian government and other relevant organizations for many years. It has faced some changes in strategy and performance over the years. Nevertheless, there has been little progress made in these regeneration programs. In the most recent decisions, UDRC delegated a portion of its authority to urban renewal organizations, which could improve the provision of regeneration services and communication with other stakeholders. Given the nature of regeneration programs involving multiple stakeholders and diverse projects, the governmental governance approach is no longer effective and these programs need to be implemented through Public-Private Partnerships that promote projects through collaboration between public-sector stakeholders such as municipalities, and the private sector such as builders and people. Any shift in the approach to Public-Private Partnerships requires a change in governance. Given the social network analysis, the current situation involves a decentralized governance dominated by government organizations. This should move towards interactive governance and evening the level of collaboration across the network to engage all stakeholders in decision-making.

Conclusion and Suggestions for Future Research

Numerous studies have been conducted to provide a comprehensive definition of governance. For instance, Lynn et al. defined governance broadly as a system of laws, regulations, judicial decisions, and administrative practices limiting or legalizing the provision of government-sponsored goods and services. This definition provides the necessary context for traditional governance structures, while facilitating the development of new decision-making forms (Lynn Jr, et al., 2001). Stoker believes, on the other hand, that governance refers to the rules and forms of directing the collective decision-making. The emphasis on collective decision-making indicates that governance is not about individual decisions, but refers to decisions adopted by a group of individuals, organizations, or decision-making systems (Stoker, 2004). He also believed that there is an agreement between scholars on the fading the boundaries between private and public sectors throughout the development of governance networks (Stoker, 1998).

In an effort to shift the focus on interactive governance in regeneration partnerships, this paper employed the social network analysis method to determine the current situation and compare it against the desired situation proposed in the review of relevant literature. However, this paper failed to precisely cover the administrative processes and governance mechanisms on decision-making. Therefore, future studies can explore such processes and mechanisms in addition to expanding the current findings and proposing practical solutions to the public-sector projects and industries.

Endnote

1. UCINET is a Social Network Analysis software

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