URBAN MAPPING IN FAYETTEVILLE

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ABSTRACT

Urban mapping is a type of visual graphic presentation of concepts, conditions or processes. In the cities one may use urban mapping when it comes to how and where businesses are located. People think that businesses are just in a particular location, without understanding the whole planning process. The question is who decides where and what types of businesses go where, or does income and status play a role in urban planning. If you were to look at the city of Fayetteville, North Carolina, you would see a vast difference in the neighborhood businesses, they can range from high end stores, and to the low end convenience stores that sells grocery store items at a higher price to the community. How can urban mapping restructure the different communities and make all of the same business available to everyone? As the city planner, understanding the needs of the community and the needs of the business's owners to make a profit would have to be taken into consideration. One view point would be to have the city planners make the decision on what type of business should go in certain areas, this way it would create uniformity across the city and allow people to shop at the same types of business regardless of where they live. On the other hand, the businesses would still have to make a profit and carting to all types of people in the city might not have their best interest in mind. How can urban mapping are used to create a uniform city and look at the different demographics, which would allow for a variety of business to be in the city, without looking a wealth and status as a factor.

Key words: Urban Mapping, planning, city, location.

INTRODUCTION

A city is an inhabited place larger or more important than a town or it can also be referred to as a municipality in the US governed by a charter granted by the state according to Webster's New Dictionary of the English Language. According to the source "What is a City?" by Lewis Mumford a city is "a theater of social action," and everything else-art, politics, education, commerce-only serves to make the social... more richly magnificent, as a stage-set, well designed, intensifies and underlines the gestures of the actors and the action of the play. Mumford's theory is based on more of an urban drama where the city is more of a stage and the people that live in the city are portrayed as actors. Merriam Webster defines a city as a place where people live that is larger or more important than a town or an area where many people live and work. The Oxford Dictionary defines a city as a large town or incorporated municipal center. According to Ask.com a city is a relatively large and permanent settlement. Dictionary.com defines a city as a large or important town or an incorporated municipality, usually governed by a mayor and a board of aldermen or councilmen.

STRUCTURE OF A CITY

Cities can be structured in many different ways depending on their various layouts and how they are planned. Cities could be structured on the various types of businesses located within certain areas such as the city of Fayetteville North Carolina. If you think about it there are some dilemmas when it comes to planning cities mostly when it comes to the distribution of problems with the public and their differences in their opinions about what goes where. This is according to the article "Dilemmas in a General Theory of Planning" by Horst W.J. Rittel and Melvin

M Webber. If you think about it when it comes to thinking about it in more ways than one it is more than just the people that live in the city that make the decisions about things it is the planners and the developers that make the decisions. Urban planning has to be taken seriously no matter what the situation calls for but there are protocols for things like this regardless of what goes where no matter what it is that is being built. It may be a small wonder but it is a huge issue when it comes to the obvious because not everything may make sense especially with zoning ordinances such as Fayetteville's layout and the way that the city is structured based on what is where.

LAYOUT OF A CITY

As far as the layout of a city is concerned it can go however it needs to go but there are a number of that this can go. You can use a number of a number of different methods to plan cities such as virtual objects like tiles to plan things according to the article "Tiles: A Mixed Reality Authoring Interface" which mentions the fact that you can pretty much use any type of media plan anything even a city. The article also mentions that you can use different types of models to plan cities especially 3-D models to determine how the overall environment and layout of a city can look. This can be very vital to city planners because it can help them plan the way that a city can look. The article also mentions the fact that you can use mixed reality to figure out what might be able to go where based on careful planning and determination. The article also mentions that you can use AR interfaces with tiles to determine what might be able to put where.

OTHER METHODS OF PLANNING

You do not have to use just mixed reality to plan a city you can also use the whiteboard method to plan a city. This requires a lot of collaboration but it does help in planning especially if you plan on using different types of media with it such as maybe whiteboard with markers. Going back to the tile method there are three different types of tiles that one can use to plan and they are data tiles which are genetic data containers, operator tiles which are used to perform basic operations on data tiles, and menu tiles which make up a book with tiles attached to each page. This can take a lot of research but it does help in trying to plan a city from a visual perspective because you can use that technology to do it. You can also use other things like everyday objects such as books, papers, notes, tools or whatever else that you can think of to plan a city if you think about it even toothpicks could be used to plan a city of you wanted to do that. There are more ways of planning than just tiles and whiteboards you can also use a vision to determine what a city ought to look like and plan it based on that. Of course there is more to that than just having a vision you have to have the right products to do so and the products have to evaluate. Evaluation is a key process and it means the systematic assessment of the worth or merit of some object, this can really help look at everything. There is the plan of evaluation which can have the plan assessment, plan testing and evaluation, a plan critique, comparative research and professional evaluation and post hoc evaluation of plan outcomes. You have a lot to consider at the same time and one of the things that you have to think about is what to evaluate. There are a number other things to think about such as the approaches such as the counterfactual approach and the postmodern approach.

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Techniques to Planning

There are techniques to planning as well and a number of ways to do this and just by looking at the city of Fayetteville you can tell that there was a lot of planning done to get the city to look the way it ought to. You really have to take a lot of caution when plan a city because it takes a ton of effort to doing so and they have to be very specific. There are a number of zoning ordinances involved because you cannot put whatever you want where ever you want to All of this data comes from the "Berkley Planning Journal" by Lenora Susan Waldner.. Take Fayetteville for example to some people it looks like everything is all over the place but from the local's perspective it is not so because to someone that lives here it seems like everything well planned and well organized. This is due to the amount of planning that the people of city do for the most part and looking from a business perspective it makes a great deal of sense.

Rules for Urban Mapping

Most people do not realize the fact that there are rules that you have to follow when you use urban mapping to plan a city. There is only one way to plan a city correctly and that is using GIS which is based on the rule and it is very crucial to urban mapping. GIS is very important when it comes to map and data sorting because it helps researchers configure the data that they might need. The rule based expert system is very crucial because what this system does is it programs the conditions the actions in order for them to be true. You can use the system for anything these days even architecture because it can help you formulate everything that you might need to know along with some of the approaches that you can take.

You can use compare methods of urban mapping by using digital imagery when you look at a city mostly by using high resolution digital multispectral imagery. There are several methods as to how this is done and one of the ways to do it is by studying the area and the data sources. This can be very useful if you were to study Fayetteville because of the type of ecosystem that the city has. There is also the classification system that you can use it to label everything and classifying everything as well. There is also training and reference data which can be used study different sites either on the field or by photo interpretation which are actually orthophotos.

You can use fractal and spatial autocorrelaion techniques to extract urban and suburban information from remotely sensed data. There is the data and study area that can be used to identify urban land use and land cover categories. The methods that are used are the Lacunarity approach which uses a number of algorithms for identifying geometry. There is the binary approach which also works and that is placed at the top left corner of an image which can be filled with pixels. You can also use the gray scale approach which can also help but the one thing that it does is it can transform binary images. The article "Examining Lacunarity Approaches in Comparison with Fractal and Spatial Autocorrelaion Techniques for Urban Mapping" by Soe Mylnt and Nina Lam talks about these methods. Fayetteville has a variety of businesses in different parts of town based on www.city-data.com . Fayetteville doesn't have one or two of everything infact this city has multiples of most businesses mostly because of their locations and why they are in particular parts of town. This city alone has most everything that you can think of due to the location factor but that is not the only factor that matters. Most of it is for convenience so that the people that live here can get easy access to whatever they need whenever they need it. Most of these businesses are located in and around shopping centers which are located near neighborhoods so that the people that live in the neighborhoods can get easy access to these places. It is not easy for everyone to get access to everything but with careful planning it is closer than you think it really is and in the end that is what shapes any city and Fayetteville is just that way mostly because it is a medium sized city where everything is close by.

CONCLUSION

When you look at how a city is structure you must first understand that the planning, the tools, and different zones. It isn't simple that you go in put different businesses in, there has to be some type of planning involved because of the needs of the community. Looking back at everything that has been mentioned so far and looking at Fayetteville it makes sense because if you think about it the city meets a lot of criteria. If you look at it Fayetteville from a business's perspective it is true because Fayetteville itself is a city with many different businesses in many different parts of town. You have the high end boutique type stores the down town area and going towards downtown. You have your chain stores which are also in a certain part of town mostly near the mall area. You also have various shopping centers in different parts of town that cater to different people not because of income but because of location. It is not just the shopping centers there are other businesses in the city that are in certain areas but other businesses like restaurants', gas stations, and grocery stores that are built in certain parts of the city mostly because of careful planning.
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References

Choi, Jinmu., and E. Lynn Usery. 2004. "System Integration of GIS and a Rule-Based Expert System   for Urban Mapping." Photogrammetric Engineering & Remote Sensing Vol. 70. No. 2: pp. 217-   224.

Couloigner, Isabelle and Thierry Ranchin. 2000. "Mapping of Urban Areas: A Multiresolution   Modeling Approach for Semi-Automatic Extraction of Streets." Photogrammetric Engineering   & Remote Sensing Vol. 66. No. 7: pp. 867-874.

Gordon, Peter., and Micheal Keaton. 2000. "DEVELOPERS: THE CITY PLANNERS." Lusk Center   for Real Estate

Mumford, Lewis. 1937. "What Is a City?" Contemporary Urban Anthology pp 93-95

Mylnt, Soe W., and Nina Lam. 2005. "Examining Lacunarity Approaches in Comparison with Fractal   and Spatial Autocorrelation Techniques for Urban Mapping." Photogrammatic Engineering &   Remote Sensing Vol. 71. No. 8: pp. 927-937.

Poupyrev, Ivan, Desney Tan, Mark Billinghurst, Hirokazu Kato, Holger Regenbrecht, & Nobuji   Tetsutani. 2001. "Tiles: A Mixed Reality Authoring Interface."

Rittel, Horst W. J., and Melvin M. Webber. 1973. "Dilemmas in a General Theory of Planning" Policy   Sciences 4 pp. 155-169

Thomas, Nancy, Chad Hendrix, and Russell G. Congalton. 2003. "A Comparison of Urban Mapping   Methods Using High-Resolution Digital Imagery." Photogrammetric Engineering & Remote   Sensing Vol. 69. No. 9: pp. 963-972.

Waldner, Lenora Susan. 2004. "Planning To Perform: Evaluation Models For City Planners." Berkley   Planning Journal, 17 (1)