

Bezel and Notch Free Mobile Phone Design for Modern Trends.

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Abstract:- Mobile phone is a widely used part of our life. Now it's a challenge also how we can design it more user friendly. From start to present mobile phone changed their shape by the help of different mobile manufacture company. To ensure clients satisfaction design is the most important part. So in this paper I proposed bezel and notch free mobile phone design to ensure more display size.

Keywords:- Design, Mobile phone, Bezel and Notch, Market trends, Phone size, 100 % display.

I. INTRODUCTION

After launch iphone X in the market the concept of mobile phone design has been changed dramatically. The main part of their design is bezel free and small notch in the upper side on the screen. In this small notch they use front camera, speaker and some sensors. Maximum clients welcome this design because they get small mobile phone but big screen and it's suitable to use by one hand.

After this new design released, others mobile manufacture company started to ensure big screen size by removing bezel and notch. Some company already got their patent under display sensors. So now one question, how we can ensure 100% mobile phone screen size. For answer this question I design a conceptual idea where I try to ensure 100% display size.

➤ Structure of the paper

The rest of this paper is organized as follows. 1.1. Description of bezel and notch. 1.2 Compare among different latest device design. 1.3. My design approach. 1.4 Conclusion of this paper.

A. Description of bezel and notch

Bezel is a word used to describe the outside frame of a computer, monitor, mobile phone or other computing device. It is important for product developers and designers to evaluate the overall measurement of the device / content and its possible impact. New device designs such as the iPad allow for a very narrow bezel, more screens. It has become a growing important design factor for consumers. Electronics such as tablet computers and smartphones are increasingly moving toward a bezel-less design. The bezel serves to hold the screen in place, and perhaps also reduce unintentional inputs on a touch screen.

Notch is the upper side extended part of bezel in the screen of devices. Now different company uses this notch for their latest mobile phones. They use speakers, front camera and some sensors in the notch part.



Fig 1:- Bezel and notch

B. Compare among different latest device design in market

Here I show some largest mobile manufacture company's latest mobile phone and their trend. Apple, Samsung, Huawei, Xiaomi and Asus all are launched their latest phone with small notch and Xiaomi try to remove notch. The main focus all devices are to ensure big display size. Average dimensions are almost same but main differences in notch and bezel. Samsung has the lowest bezel in right and left side. Asus maintain big display with low bezel and small notch size. All this latest devices released date in October 2017 to April 2018.

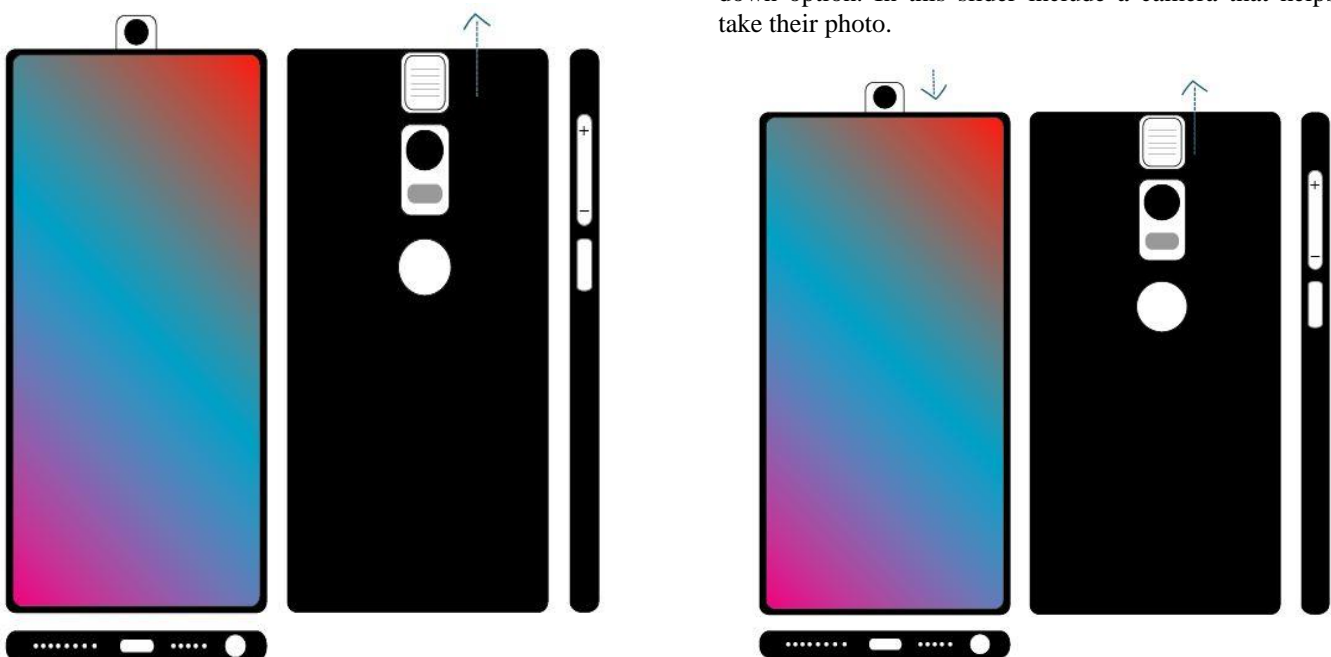
Manufacture(model)	Photo	Dimensions	Release date
Apple(iphone X)		143.6 x 70.9 x 7.7 mm (5.65 x 2.79 x 0.30 in)	2017, October
Samsung (S9)		158.1 x 73.8 x 8.5 mm (6.22 x 2.91 x 0.33 in)	2018, March
Huawei(P20)		155 x 73.9 x 7.8 mm (6.10 x 2.91 x 0.31 in)	2018, April
Xiaomi(mix 2s)		150.9 x 74.9 x 8.1 mm (5.94 x 2.95 x 0.32 in)	2018, April

ASUS(Zenfone 5)		153 x 75.7 x 7.9 mm (6.02 x 2.98 x 0.31 in)	2018, April
Oppo(R15)		155.1 x 75.2 x 7.4 mm (6.11 x 2.96 x 0.29 in)	2018, April

C. My design approach

In order to continue the marketed current trend, mobile phone companies are determined that they are all time trying to introduced modern design and latest technology. They are trying to simplify the design with the maximum advantage of the user. They are not just bringing changes to external but making changes in hardware significantly.

To ensure 100% display size main problem is replace front camera because it's a frequently useable part of mobile phone. And speaker is others part that need to place in upper part that means when we talk need to ensure that our speaker is near our ear. Speaker problem already solved by others company's design [5]. The main problem is front camera that I try to solve by design.I just replace this front camera in back side of mobile phone and use a slider to up down option. In this slider include a camera that helps to take their photo.



It's easy to use because user can up slide manually when he want selfie photo or make a video call. How to front that's mean slide camera will be opened? Answers are, when user just up his slide front camera automatically open and be ready to take photo. After took photo he just down side camera manually. Others way, we can operate by software option. When user just press the camera icon on screen and ensure his selfie photo option the side also automatically will be up and when photo will be complete then side down automatically.

D. Conclusion

Now people want to big screen mobile phone because they use mobile phone not only talk but also others task. For example browsing, gaming, watching, video calling, open two windows at same time so big screen is essential. But if company wants to ensure big screen, after all mobile phone size will be big and it became tough to use one hand and carry in regular pockets. Now some manufacture mobile phone company released some new model where they try to ensure big screen without increased size of mobile phone. But still now they failed to ensure 100 % screen size to solve this problem this is my approach.

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