Design Trend Research for Building a Future
Physical-Cyber Ecosystem

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Abstract. China, now the world's second-largest economy with a massive user
crowd, there is a surge growth of mobile internet business, products and users.
Every year, numerous of new companies and products are incubated or landed
in this market, some of them made huge success, and lots of them failed too.
To those who including companies and individuals invest in this market,
they want to find some patterns, design trends, inspiration, and more important-
ly, to find some leads to the successful future design innovation. They need a
better reference and more powerful design cards in hands during the process of
creation. However, neither the design trend nor creative ideas are tangible. They
are abstract. We all as users can feel mobile products are offering an easier and
more and more comfortable user experience to attract users to love using these
products. This sensitive cognition is the premise and base of designer's creative
learning activity, but it can’t be a reliable reference of the next generation of
innovation.

Where the design trends are now and where the future design innovations
are will be presented in a more tangible way. We need two steps to achieve that.
First of all, we need to find out what design trends are based on the studies
of what just happened in mobile product design field. This is about seeing and
understanding design trends in a narrow level.

From the most popular mobile platforms like Android, iOS and Widows
Phone, top-ranking applications listed as our research object, to the major itera-
tion of applications, with the purpose of summarizing design trends, we built a
research model with two study dimensions. The research of the horizontal di-

mension, which we call it the Combing System, focuses on the design evolution
of applications by studying 21 general task-flows and some particular task-
flows we defined, as well as the evolution of style guide of platforms them-

selves. Each task-flow is given a representing color sequence which not only
helps us to represent research data in a visualized way, it will be convenient to
observe one particular flow from others more clearly in the visualized data map.
We can see from our visualized data that which flow the redesign of different
type of applications is focused on. The vertical dimension, which we call it
Stamping System, focuses on the research of the major iteration of applications.
Unlike dyeing different task-flow in the Combing System, we trace every task-
flow, so we can observe how the design of each flow changes from the previous
form into the latest one by comparing the trace of task-flows of the newest
and the previous version of an app together in a visualized data map. More
interestingly, this research model can also help us to observe how one platform’s style guide including UI and GUI style can affect each other.

Secondly, we relate design trends we summarized with major trends of development of Chinese social context, because isolating design trends research from their social context would be meaningless and pointless. The other reason to put the consideration of Chinese social context in the research system is that it is changing frequently which cause the more complex scenario and user needs.

After relating design trends and social context together, we now need to learn from the process of the creation of classic design by fully understanding offering better user experience design does not only exist in high technology time. We should realize that the reason why classic design became classic design is not only about creating something new successfully, it is about combining different things that already existed to provide a better user experience for the most of the time. Radical design takes years to succeed and most of them failed. Future creation will not all incubated in the rocket high technology labs, we can not just count on that to innovate, most of them will be created by combining different things together to provide a better user experience like how classic design succeeded. We can search for new possible combinations in this bigger picture consists of design trends and their social context, and this also can help us to understand how to build a harmonious physical-cyber ecosystem for both products and users who will use them.

Besides a tangible way that we can tell where the design trends now are and where the future design innovations are in the bigger picture, the physical-cyber ecosystem, we also have some advices for designers: keep searching new possible combinations in the ecosystem to fix problems with better user experience, not just think of yourself as problem solver also the problem seekers. Don't be afraid to put your product in the market once you see a new potential connection. Only these can make us keep creating and innovating.

Keywords: UX, Design, Trend, Research, Innovation.

1 Project Background

Today in China, there is the most rapid growth and development of mobile internet business and products with a largest body of users. Mobile platforms have integrated many important aspect of people’s everyday life such as lifestyle, entertainment, social net-work into a portable and personal device. There are many traditional business are attempting to develop products based on mobile platforms: many hospitals are building mobile HIT system in a large scale, and pharmaceutical enterprises are founding their own information management system to help themselves, some of whom might based on a remote area in China, reach out to most advanced drug labs all around the world and cooperate through mobile platforms.

With the purpose of achieving successfully, there is no doubt that we need to design mobile products with positive basic user experience elements. Nonetheless, doing well on basic elements can not assure the success when dealing with the most complex body of users and the rapid changing usage scenario. Besides, Major