



**The vision of Agriculture network community information integration: A case study of China agriculture sustainable development information service mobile interconnection**

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**Abstract:**

*The article investigates the situation of the information mobile interconnection within Chinese agricultural information network community and the situation of those community users acquiring the information mobile interconnection, putting forward to an idea of China agricultural sustainable development information service mobile interconnection. It seeks the route for the network community mobile interconnection integration, leads Chinese agricultural information users to have a “pure” point to surface communication in a broader space finally, and mostly ensures the agriculture network community users to have more specialized and simplified “self-organization” information using space.*

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## **1. Introduction**

With the development of network community mobile information service, international information resources collection, organization, revelation, transmission, and other links also change. Network community space more specifically carries on "two points direct information transmission". According to this thought, based on the investigation of Chinese agricultural information web network community and analysis of China's agricultural information service guided by mobile Interconnection concept, the thesis explores more simplified and intelligent mobile phone platform information integration model, thus to make Chinese agricultural information cyber source system as a sustainable development center dynamic information sources, guiding agricultural information users have a "pure" point to surface communication in a broader space and ensuring agricultural network community users to have more specialized and simplified "self-organization" information using space.

## **2. The condition of Chinese agricultural network community information service**

In 2011, Chinese Netizen Internet application habits change remarkably. Instant communication utilization rate rises quickly, increased to 80.9%, the social networking user number is 244 million, which is a slight increase compared to the figure at the end of the year 2010. In utilizing rate, the social networking user accounts for the ratio of 47.6% of Internet users. ①According to I Research, 65% network community in China provides SNS, now most of the Internet community with considerable scale and technical strength carry out the SNS, Internet community in China showing a growing trend of being SNSized. ②Of which, various forms of service by agricultural network community are also developing rapidly

## 2.1 Chinese agricultural network community information service providing forms

| Table 1: the condition of Chinese agriculture websites network community information providing |                              |             |          |                |                  |                                  |              |                |
|--|------------------------------|-------------|----------|----------------|------------------|----------------------------------|--------------|----------------|
| Site name  | Wireless value-added service | BBS / Forum | Post Bar | Bulletin board | Group discussion | Online chat                      | Make friends | Personal space |
| China Agricultural Information Network   | √                            | √           | √        | √              | √                | √                                | √            | √              |
| A station through site   | N/A                          | √           | √        | √              | √                | N/A                              | N/A          | √              |
| Agricultural Mechanization Information Network   | √                            | √           | √        | √              | √                | √                                | √            | √              |
| The processing of agricultural products information network                                    | √                            | √           | √        | √              | N/A              | N/A                              | √            | √              |
| Farming ability promotion network  | √                            | N/A         | √        | √              | N/A              | N/A                              | √            | √              |
| New countryside construction information network   | √                            | N/A         | √        | √              | N/A              | N/A                              | √            | N/A            |
| Quality products information network   | √                            | √           | N/A      | N/A            | √                | √                                | √            | √              |
| Online exhibition  | N/A                          | N/A         | √        | √              | N/A              | √                                | N/A          | √              |
| Data source : Webpage statistical survey   |                              |             |          |                |                  | Date: 2012 26 <sup>th</sup> Mar. |              |                |

The data in Table 1 shows that China agricultural information network, which ranks No 1 in click number in Chinese agriculture website group (total clicks reach 1.8 billion in 2009) accounts for 71.1% of the total number of all retrieval. China agricultural information network provides a great deal of various types of information and business service which is closed related to production and business activities and daily life for farmers, agricultural enterprises and the vast number of social users according to industry (breed) and region. the website contains all the network community service elements (BBS / forum, post bar, bulletin boards, discussion groups, online chat, friends making, personal

space, wireless value-added service and other forms of online communication space). Network community service content of other sites is relatively weak due to smaller scale.

## 2.2 The condition of Chinese agriculture network community information user mobile space

According to data of I Research, in the age distribution of Chinese network community users in three consecutive years 2008, 2009, 2010, core users still focus mainly on 19-30, accounting for 70% of total users. Sample survey on 300 persons is mainly around the above core users.③

**Table 2: The condition of Chinese agriculture network community information user mobile space**

|                              | Individual farmer | Agricultural commodities broker | Large Grower | Agricultural Insurance Consultant | Individual fishermen | Farm machinery salesman | ranch owner | Agricultural products dealer |
|------------------------------|-------------------|---------------------------------|--------------|-----------------------------------|----------------------|-------------------------|-------------|------------------------------|
| Have RSS                     | 5%                | 11%                             | 5%           | 15%                               | 5%                   | 3%                      | 11%         | N/A                          |
| Have BLOG                    | 7%                | 17%                             | 19%          | 20%                               | 11%                  | 10%                     | 7%          | 12%                          |
| Have MSN                     | 16%               | 44%                             | 37%          | 24%                               | 24%                  | 5%                      | 22%         | 29%                          |
| Have QQ                      | 52%               | 77%                             | N/A          | 47%                               | 24%                  | N/A                     | 23%         | 44%                          |
| Have mobile phone mail-box   | 33%               | 34%                             | 5%           | 26%                               | 5%                   | 5%                      | 17%         | 55%                          |
| Have mobile phone space      | 64%               | N/A                             | 6%           | 9%                                | N/A                  | 5%                      | 11%         | 65%                          |
| Wireless value-added service | 2%                | 14%                             | N/A          | 14%                               | 11%                  | 5%                      | 13%         | N/A                          |

Data source: Sample survey on 300 persons

survey date: 2012 9<sup>th</sup> Mar

The data in table 2 shows that Chinese agriculture network community information users accept a variety of forms of information mobile space service, but people who have mobile phone QQ have the highest ratio, the number of those who have mobile phone mailbox and space is also increasing day by day.

The above investigation shows that network community providing various types of service and mobile space service intends to take the Web2.0 concept as recommended technology leading the service to the user terminal. This is the information adjustment form of the era.

### 3. Chinese agriculture network community information user value-added orientation

Network community information as a kind of open space information, some is mechanism of gathering friends, some is a forum for topic discussion, some is interpersonal relationship gathering, some is a theme to gather friends. But in the future, to make the Internet community develop its real potential, much small micro content participation must be emphasized. Much more flexible network organization structure is expected to meet more dynamic, more specific and opener information value-added, so as to achieve the national information service mode which can rapidly respond to customer service need.

#### 3.1 mobile Internet service content expected by Chinese agriculture network community information users

**Table 3: mobile Internet service content expected by Chinese agriculture network community information users**

|                           | Individual farmer | Agricultural commodities broker | Large Grower | Agricultural Insurance Consultant | Individual fishermen | Farm machinery salesman | ranch owner | Agricultural products dealer |
|---------------------------|-------------------|---------------------------------|--------------|-----------------------------------|----------------------|-------------------------|-------------|------------------------------|
| Weather information       | 13%               | 34%                             | 32%          | 22%                               | 23%                  | N/A                     | 26%         | 28%                          |
| dynamic Sales information | 33%               | 22%                             | N/A          | N/A                               | 25%                  | 37%                     | N/A         | 26%                          |
| Bank information          | 34%               | N/A                             | 32%          | 25%                               | 21%                  | 34%                     | 44%         | 17%                          |
| Special-purpose database  | 32%               | 23%                             | 34%          | 36%                               | N/A                  | 34%                     | 53%         | N/A                          |
| Tax information           | 11%               | 23%                             | 55%          | 9%                                | 31%                  | 33%                     | %           | 16%                          |
| Statistical data          | 12%               | 55%                             | N/A          | 33%                               | 11%                  | 21%                     | 12%         | 12%                          |

Data source: Sample survey on 300 persons survey date: 2012 9<sup>th</sup> Mar

The data in table 3 shows that all kinds of dynamic, specific micro content acquisition becomes the new content of network community information users. All the user information acquisition emphasizes one point, the information acquisition must be fast and accurately classified.

### 3.2 Service forms expected by Chinese agriculture network community information users

Table 4 : Mobile Internet service forms expected by Chinese agriculture network community information users

|   | Individual farmer | Agricultural commodities broker | Large Grower | Agricultural Insurance Consultant | Individual fishermen                  | Farm machinery salesman | ranch owner | Agricultural products dealer |
|---|-------------------|---------------------------------|--------------|-----------------------------------|---------------------------------------|-------------------------|-------------|------------------------------|
| Mobile phone space                        | 11%               | N/A                             | 37%          | 22%                               | 20%                                   | 8%                      | 32%         | 32%                          |
| Mobile phone voice                        | 23%               | 15%                             | 16%          | 24%                               | N/A                                   | 15%                     | 12%         | 13%                          |
| Mobile phone mailbox                      | 34%               | 65%                             | 47%          | 46%                               | 11%                                   | 16%                     | N/A         | 15%                          |
| Mobile phone QQ                           | 34%               | 37%                             | 36%          | N/A                               | 12%                                   | 22%                     | N/A         | 15%                          |
| Mobile phone forum                        | 6%                | 37%                             | 43%          | N/A                               | 14%                                   | 24%                     | 41%         | 15%                          |
| Mobile phone message                      | 28%               | 54%                             | 44%          | 46%                               | 14%                                   | 24%                     | 21%         | 15%                          |
| Data source: Sample survey on 300 persons |                   |                                 |              |                                   | survey date: 2012 9 <sup>th</sup> Mar |                         |             |                              |

The data in table 4 shows that for the core user network community micro content transmission by the channel of mobile phone is developing in many forms. Mobile phone interconnection becomes a kind of information aggregation method which can be accepted by users and of efficient use.

The above investigation shows that the new network information mobile interconnection mode should make the information users participate in the information creation, and be involved into the whole process of information processing and service. The traditional single and independent network community information service pattern should change to the collective processing service based on the collective wisdom and social cooperation.

#### 4. Exploration on the vision of Chinese agriculture network community information integration

In order to realize the essence of space information service -- technology progress and content personalization, more agricultural website and information users are involved in the integration process of mobile information space interconnection. As for China's agricultural information service field and the overall SNS, the sustainable development of

the agriculture information service is in the period of adjustment and transition, although the construction of many Internet platforms is still not mature, but the main point is to innovate with the combination of Chinese agricultural information user's psychological characteristics and communication methods, as well as the long time accumulation of platform construction and user habits training.

#### 4.1 Chinese agriculture network community information integration concept

The future mobile phone interconnection service of agricultural information users will be developing around the actors and the structural balance between many relations, building core theme channel of network community, such as RSS gathering linking words formed by agricultural community resources metadata record statistics, as much as possible to make the linking module of the current national agriculture portal websites as the common point for the integration.

More simplified and intelligent mobile phone platform mode be used as an innovation mode for information integration and sharing, adjusting the specific interaction relations between agricultural community network information users, enabling the mobile phone platform involved into a new generation of Chinese sustainable development of agriculture information service social network, guiding agricultural information users have a "pure" point to surface communication in a broader space finally, ensuring agricultural network users to have more specialized and simplified "self-organization" process.

#### 4.2 Chinese agriculture network community information integration route

For the community network information aggregation, probing to RSS aggregation induced to mobile phone mobile information services, to play the function of being specific, subdivided and individualized, should be the aggregation route for the future network community information integration.

① To acquire agricultural web portal RSS information resources. Network community individuals based on their information orientation, accepting information test push form information website, accepting the document set key words push, accepting custom website push, collect the information to personal mobile phone for browsing acquisition.

② To design individual RSS directory homepage. a great deal of RSS Feed, custom channel group, adding new channels and so on in community network need to be added and deleted for the classification management of RSS Feed and its browsing, retrieval, adding information channel content which the network community users pay most attention to.

③ To extend personal information for open acquisition .To conduct push custom according to the relevant RSS catalog channel, open components about important information (including the title, abstract and the information links on original site) be freely added to

RSS and notes etc , will be used by other people of the field through the form of mobile interconnection..

The above three-step-route shows a person as a manufacturing center to experience "RSS + Personal Homepage + online tools" three in one pattern route. In the level of specific application users should be given a unified standard design, using a uniform labeling customized subscription space. guided by government information resources.

## **5. Trial cases of Chinese agriculture network community information integration**

Presently , agriculture network community information exchange of different countries are mainly by message push, users usually can edit the acquired messages and send them to other users, the mobile phone RSS aggregation applications on the real sense is still on exploration. The future mobile integration mainly by RSS should be based on the concept of "subdivision of the users, narrowing the spread, promoting content", to explore personal information and agricultural knowledge integration mobile tests in which "persons" play as the center aggregation, establishing intelligent mobile phone mobile information platform, which is absolutely a great dream.

### **Case 1: Beijing agriculture PDA intelligent mobile phone application**

Beijing agriculture PDA mobile phone, taking modern agricultural production management as the main object and the mainstream intelligent mobile phone in the market as the platform, applies agricultural knowledge acquisition technology (to achieve question and the grid analysis of interactive knowledge acquisition technology) , embedded technology (to achieve the transfer from a desktop PC system to intelligent mobile phone system, using the data replication and caching technology, the setup program being backed-up, saved and run on the storage card), intelligent decision technology (achieving facts leading to conclusion, utilizing rules and knowledge structure principle in the other knowledge base, increasing the link information) and other key technology, forming powerful agriculture embedded intelligent service system. ④

Case 2: "Chinese science agriculture information mobile expert" platform , is a network data service system for information product to be customized, taking large agricultural commodity supply and demand information dynamic database and agricultural commodity market price dynamic database as the core, combined with agricultural experts' instant interactive guidance, through the China Mobile GPRS network and embedded agricultural information mobile phone, providing information including intelligent supply and demand information matching, intelligent agricultural product price classification, agricultural expert interaction to solve pest control, dynamic market trend ,forecast and analysis, as well as agricultural news. ⑤



## **6. Conclusion**

From the above, as an agricultural big country, China should timely and fully carry forward mobile Internet service for agriculture network community users, which can ensure the open acquisition in the stratified space of community, which can make the operation framework for the exchange of information more flat, make the service space with more depth, make the service direction more diversified in the process of sustainable development of agriculture, thereby allowing more China agricultural information users feel the humanistic care by modern information service.

## **Acknowledgments:**

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2. Commission of agriculture of Jiangsu Province

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