

Extension Functions

- Linking producers/farmers to markets
- Raise (general) awareness of opportunities
- Provide technical information; demonstrate, or train
- Diagnose problems and recommend solutions
- Respond to follow up questions raised by clients
- Provide mass advisories
- Facilitate access to credit and inputs
- Assist with business planning
- Conduct surveys, enumerations, or for monitoring and evaluation
- Knowledge management

Information and Communication Options

- Radio and other audio
- TV and Videos
- Cell Phones
- Smart Devices (apps and internet)
- Computers and Internet

Resources and Tools: Information and Communication Technologies, <http://www.meas-extension.org/resources/ict>

ICT Options in Relation to Extension Functions

| Extension Function | Information and Communication Technology and Tools | | | | |
|--|---|---|---|---|---|
| | Radio | TV and Videos | Cell Phones (text, voice) | Smart Devices | PC, Internet tools |
| Linking farmers to markets | Price reports | | Access to price information (call in, subscriptions) | Can bring potential buyers and producers together; access price information | Can bring potential buyers and producers together; price info. |
| Raise (general) awareness of opportunities | Very good | Visuals are usually very helpful as "seeing is believing" | | Good option for intermediaries to seek information | Good option for intermediaries to seek information |
| Provide technical information; demonstrate, or train | Some potential – but limited information delivered | Visuals are usually very helpful as "seeing is believing" | Some potential if farmers can call or text in and sufficient expertise is available | Additional potential to a simple cell phone as it enables web access and plays videos well. | Good option for intermediaries to seek information |
| Diagnose problems and recommend solution | Some potential if dealing with general problems | | Some potential if farmers can call or text in and sufficient expertise is available | Additional potential to a simple cell phone as it enables web access. Special diagnostics "apps" are already available. | Good, comprehensive tools are available |
| Respond to follow up questions raised by clients | Good if producers can call or text in and sufficient expertise is available | | Some potential if farmers can call or text in and sufficient expertise is available | Good option for intermediaries to seek information (if optimized for smart devices) | Good option for intermediaries to seek information |
| Provide mass advisories | Excellent option | Excellent option | Is an option if users are registered to receive such messages (SMS) | Is an option if users are registered to receive such messages (SMS, email) | Is an option if users are registered to receive such messages (email) |
| Facilitate access to credit and inputs | | | Mobile banking; negotiate directly with input suppliers | Mobile/Online banking | Online banking |
| Assist with business planning | | | | Simple farm management "apps"; record keeping | Farm management tools; record keeping |
| Conduct surveys, M&E, enumerations | | | Some options exist | Many new tools and options, incl. GPS tracking | |

Source: Adapted from Mark Bell and Judith Payne, 2011

Smartphones are viable tools in support of agricultural extension

- Smartphone ownership continues to increase across the ASEAN region.
- The Philippines has the lowest penetration rate in 2012 but is the fastest growing smartphone market in the region.
- Dual phone ownership has increased significantly. Most likely, one phone maybe a smartphone and the other a feature phone. (The data though does not reflect ownership of single phones with dual SIMs.
- Homegrown phones are slowly increasing their market share over high-end phones.
- There are more Samsung users than iPhone users in the Philippines.
- Use of apps is steadily increasing; more and more are becoming knowledgeable with apps

Apple iPhone 5C: The Good, the Bad and the Ugly, <http://www.yugatech.com/anything-apple/apple-iphone-5c-the-good-the-bad-and-the-ugly/>

How much time do Filipinos spend on their smartphones? <http://www.rappler.com/business/39027-filipinos-smartphones-nielsen-report>

Smartphone market nears saturation in parts of Asia,

<http://www.livemint.com/Industry/XI5rgep0gNAcCRY6SBMnbM/Smartphone-market-nears-saturation-in-parts-of-Asia.html>

Homegrown smartphone brands could beat Apple and Samsung in the Philippines and across Asia,

<http://ph.news.yahoo.com/homegrown-smartphone-brands-could-beat-093034268.html>

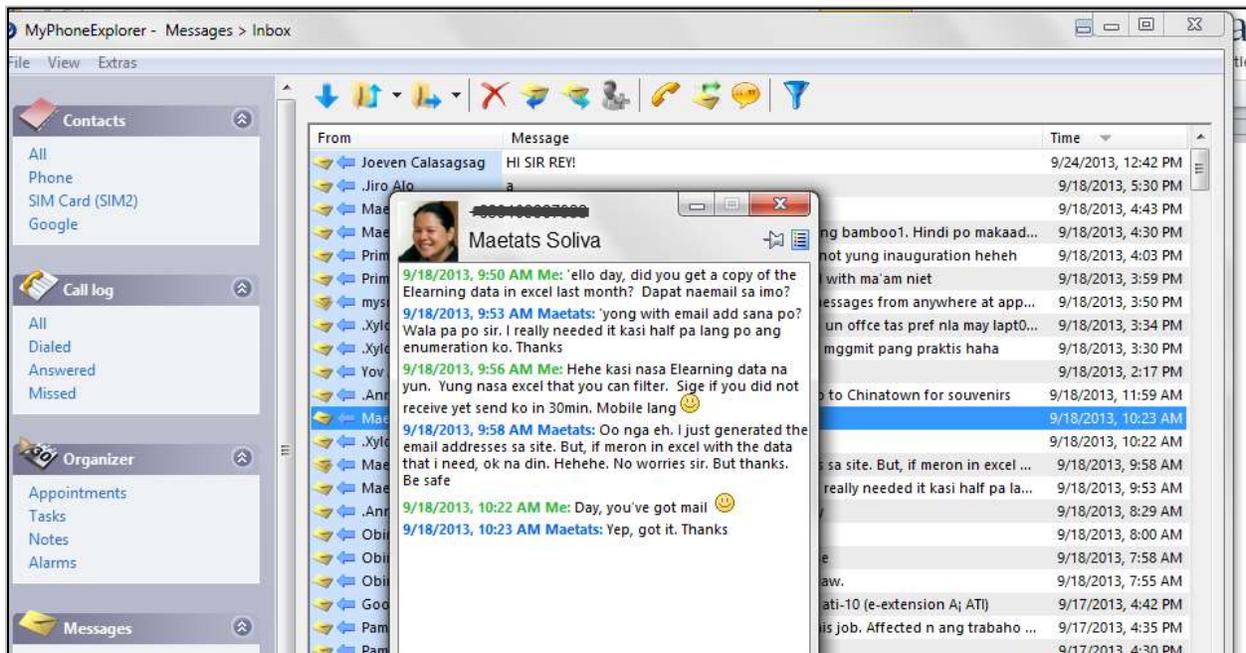
High-end smartphones do not lead the Southeast Asia market, <http://www.techinasia.com/high-end-smartphones-do-not-lead-southeast-asia-market/>

It's time to explore augmented reality for agricultural extension

- *Augmented reality (AR) is cutting-edge technology that allows for a digitally enhanced view of the real world, connecting you with more meaningful content in your everyday life. With the camera and sensors in a smartphone or tablet, AR adds layers of digital information – videos, photos, sounds – directly on top of items in the world around us. (Layar.com)*
- It requires downloading an app to scan the image or scene; scanning is performed with the camera of the smartphone or tablet.
- For example, a flyer is scanned by the device then rich media is projected out of a printed page.
- It is still new in marketing but the potential is great in extension communication.
- Prerequisite to produce:
 - the proprietary SDK (software development kit) of a vendor; some are offered free
 - cost of subscription to host (no free host at the moment) the “augmentation”
- Prerequisite to access:
 - A distinct “marker” or an indexed image
 - Good Internet connection
 - The proprietary app that should be downloaded and installed; some can't be moved to SD card
- Some sites with various examples of proprietary augmented reality, some :
 - <http://www.touchcode.de/index.html>
 - <http://blippar.com/>
 - <http://www.zappar.com/>
 - <http://www.zappar.com/>
 - <https://www.layar.com/>

How to setup your own text support

- Any agricultural extension initiative should have a basic “helpdesk”.
- Text support in the form of a helpdesk can deliver the most economical and quickest response time.
- Principally as a phone management software, the features of MyPhone Explorer can be maximized to set up and operate a functional text support system.
- With MyPhoneExplorer, SMS can be received and sent from the PC; a recent software update now includes a chat mode for extended texting with a client. Hook up a decent headset with microphone, then you have a basic call center working.
- Data in the phone can be replicated to any PC running the software.
- Requirements:
 - Android phone, version 1.5 and up
 - MyPhoneExplorer PC suite installed first in your PC, get the latest version from <http://www.fjsoft.at/en/home.php>
 - MyPhoneExplorer Client installed in your Android device, get from Google Play, search “my phone explorer”
- The system connects and syncs the smartphone or tablet to the PC via Wi-Fi, USB cable, or Bluetooth (some intermittent disconnections though when using bluetooth).
- The tablet or phone data can be browsed offline – when the devices are not connected.
- Messages and contacts can be filtered.
- Limitations:
 - one support agent per one smart device; suite is not network enabled
 - for dual SIM devices, only contacts and incoming messages are read, sending defaults to the primary SIM



Setting up an e-Learning Lounge

Rationale

- As e-learning transitions to m-learning – multi-device learning – it is also time to make current ELO (e-learning office) setups more relaxed for learning instead of the common and rigid internet-shop-like layouts; the ELO would function less as a computer lab, and more of a knowledge place.
- The main problem in setting up traditional ELOs is the cost of acquiring new PCs; for an e-learning lounge, PCs should be replaced with tablets, drastically cutting down cost -- for the price of 1 PC, it is possible to have 3-4 Android tablets.
- In previous ELOs, after PCs have been acquired, a certain degree of expertise is required for LAN cabling. Wi-Fi is easier to set-up; tablets simply connect via Wi-Fi (both types of connections have same security requirements).
- PCs need to be powered on to be used, requiring adjacent placement of power outlets or additional extension cords; PCs are “always on” equipment. Fully charged tablets do not need to be connected to the power source.
- PCs in ELOs require computer furniture; no special furniture is required when using tablets.

Description of the e-Learning Lounge (especially at ATI Centers and satellite offices)

- The e-learning lounge may be a room of its own or an anteroom to an office; it may even be sectioned off inside a bigger e-Learning Office.
- The interior decoration and ambience should predominantly be relaxing and conducive for stress-free leisure learning; It looks like a combination of a “library and a living room”, not like an internet shop.
- It will utilize inexpensive Android tablets in place of PCs; to start with, some 6-8 tablets.
- Furniture can be mixed and matched – a combination of benches, stools, small tables, mats, sofas; small tables should encourage note taking while using the tablet.
- There is space for coordinator/coordinators with PC/laptop and printer set apart from the e-learning lounge (or nook, or den).
- The tablets shall be equipped with a custom launcher to focus on what is only allowed to the user; system settings and certain apps shall be locked.
- Eventually, the e-learning lounge can evolve into an electronic library with print on demand capability, where walk-in clients access electronic copies of locally, per center produced IEC materials.

Minimum specifications for the tablets

- Screen size should be at least 8", best is 10" (7" tablets are handy in the field and are best suited where greater mobility is required)
- resolution is at least 1024x600
- running at least in Android 4.0 (ice cream sandwich)
- dual core makes things faster; quad-core is future-proofing your e-learning lounge
- good battery life, at least 5000mAh

ICT –BASED SOLUTIONS FOR AGRICULTURAL EXTENSION

ASEAN ICT Exchange Visit Program, Sept. 22 – Oct. 1, Philippines

5

- Wi-Fi connectivity (some tablets have data connection only via SIM)
- Accessories:
 - Inexpensive headphones instead of earphones (headphones are more hygienically bearable to share than earphones; some courses have audio)
 - Tablet cases or sleeves (you may want to consider sleeves with stand, may be useful for future video calls)

Current tablets in the market suitable for the e-Learning Lounge (by screen size)

Cherry Mobile Fusion Wave - ₱ 7,499.00

8" XGA 1024x768 capacitive multi-touch, 1.4 GHz quad core processor

Kata T2 - ₱ 6,999.00

8" IPS Multi-Touch Display (1024x768), 1.6 GHz dual core processor

Engage 8 (Starmobile) - ₱ 6,490.00

8" XGA 1024x768 capacitive multi-touch, 1.6 GHz dual core processor, Asahi scratch resistant glass

SKYWORTH S8 - ₱ 7,099.00

8" TFT Capacitive Multi-Touch Screen (1024x768 Resolution), 1.6 GHz dual core processor

Polaroid Executive 9.7 - ₱ 9,995.00

9.7" 1024x768 capacitive, 1.6 GHz dual core processor

O+ 9.76 Pad - ₱ 11,995.00

9.7" IPS 1024x768 multi-touch display, 1.6 GHz dual core processor

Torque Droidz Ultimate - ₱ 8,888.00

9.7" XGA 1024x768 capacitive touchscreen, High-speed 1 GHz single core processor

Coby MID 9740 - ₱ 8,995.00

9.7" LCD capacitive multi-touchscreen 4:3 (XGA 1024 x 768), High-speed 1 GHz single core processor

CloudPad 970g - ₱ 7,999.00

9.7" XGA 1024x768 capacitive touchscreen, High-speed 1 GHz single core processor

Cherry Mobile Fusion Fire - ₱ 7,500

10.1" Capacitive Touchscreen, 1280x800 High-resolution Screen, 1 GHz quad core

Coby MID 1042 - ₱ 5,990.00

10.1" Capacitive Multi-Touch 16:9 Widescreen (WSVGA 1024x600), High-speed 1 GHz processor

Cherry Mobile Supreme - ₱ 9,999.00

10.1" HD Capacitive Touch Panel, HD 1080P, NVIDIA Tegra 2 Dual Core, 1 GHz Processor

Polaroid Diamond 10 - ₱ 6,619.00

10" 1024x600 capacitive, High-speed 1 GHz single core processor