

**KANG DECLARATION
EXHIBIT 16**

EXHIBIT 18

FILED UNDER SEAL

Confidential

VZW向“SCH-i905(P4_LTE)” Market Requirement Document

	입안	심사	결정
제 재	Electronic Approval		
	Kihwan Suh	Junho Park	

Product Planning
Group

SAMSUNG

2011. 03. 31.

Product Planning Group

I. Product Overview

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1. Project Name : P4_LTE

2. Concept : Android Tablet

3. Target Launch : Jun. '11 (TA: May)

4. Target Positioning: Wholesale: [REDACTED]

5. Current Material Cost [REDACTED]

6. Target Market : North America

7. Target Carrier : VZW

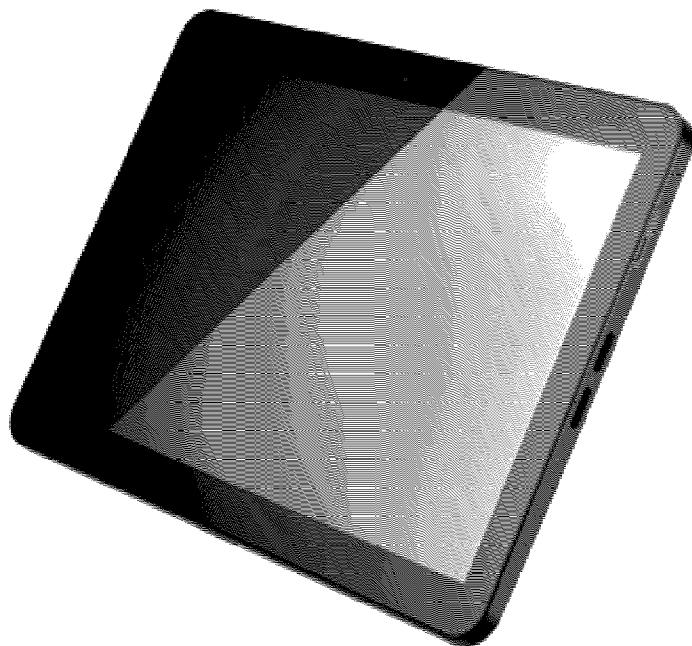
8. Target Segment : Mobile Pioneer

9. Project Level : Basic

10. Backbone : N/A

11. Industrial Design

- *Iconic Design*



12. Project Concept & Main features

- Fully Interactive PC-like experience with Honeycomb

① Design

- Solid & Compact in **256.6 x 175.3 x 8.6mm**

② User Experience

- Android Honeycomb Google Experienced Device
- Network: LTE, WiFi (802.11 a/b/g/n)
- Chipset: nVidia T20 + CMC220 + VIA7.1
- Display: 10.1" WXGA TFT, Capacitive type
- Camera: 3MP AF + 2MP VT
- Memory: 16GB iNand + 1GB LPDDR
- Sensor: Accelerometer, Light, Compass, Gyro
- USB 2.0 HS, BT 2.1+EDR, 3.5mm Standard

Headset









13. Basic Package(Small sized Eco Packaging)

Device, MTA , Data Cable, QRG

II. Product Concept & Sales Point

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1. STP Strategy (1/2)

	Mobile pioneers	Tech enthusiasts	Business professionals	Social media tribe	Expressionists	Value maximizers	Simplicity seekers	Voice-centrics
								
	6%	12%	12%	14%	8%	16%	12%	20%
Demo	<ul style="list-style-type: none"> •26-35yrs 41% •Male 67% 	<ul style="list-style-type: none"> •13-18yrs 19% •19-25 yrs 31% •Male 69% 	<ul style="list-style-type: none"> •36-45 yrs 27% •46-55 yrs 35% •Male 69% 	<ul style="list-style-type: none"> •13-18yrs 11% •19-25 yrs 23% •26-35 yrs 38% •Male 54% 	<ul style="list-style-type: none"> •13-18yrs 29% •19-25 yrs 27% •26-35yrs 24% •Female 55% 	<ul style="list-style-type: none"> •36-45 yrs 24% •46-55 yrs 32% •Female 68% 	<ul style="list-style-type: none"> •46-55 yrs 35% •56-65 yrs 26% •Female 58% 	<ul style="list-style-type: none"> •46-55 yrs 30% •56-65 yrs 33% •Female 61%
Meaning of phone	•A quintessential part of my life everyday, and it is my connection to the world	•Representation of my sophisticated taste and enthusiasm for technology	•An essential tool to increase work efficiency	•Social center to stay closely with my relationship and share experience	•A tool to express my unique style & interests	•A utility tool that helps me through the day	•A simple & reliable tool to communicate with close relationship	•An emergency tool to be reachable
Core characteristics	<ul style="list-style-type: none"> •Core techie & lead user •Web addicted (Always connected) •S/w, H/w upgrade for performance optimization 	<ul style="list-style-type: none"> •Want to catch up with newest trend to be cool •Love for latest technology •Phone =Status symbol 	<ul style="list-style-type: none"> •Typical business person looking for productivity (in particular while on-the go) 	<ul style="list-style-type: none"> •Socially active & extrovert •Has multi layered relationship •Heavy messaging & SNS 	<ul style="list-style-type: none"> •Phone is self expression •Personal customization of UI and exterior to be unique •Small in numbers but deep social circle 	<ul style="list-style-type: none"> •Family centric •Want value for quality •Utilize all the key functions & features that think practical 	<ul style="list-style-type: none"> •Want simple & UI & design •SMS and voice are main usage •Reliable core functions/features 	<ul style="list-style-type: none"> •Primary usage is call reception usually in case of urgency •Tech averse •Highly price sensitive



II. Product Concept & Sales Point

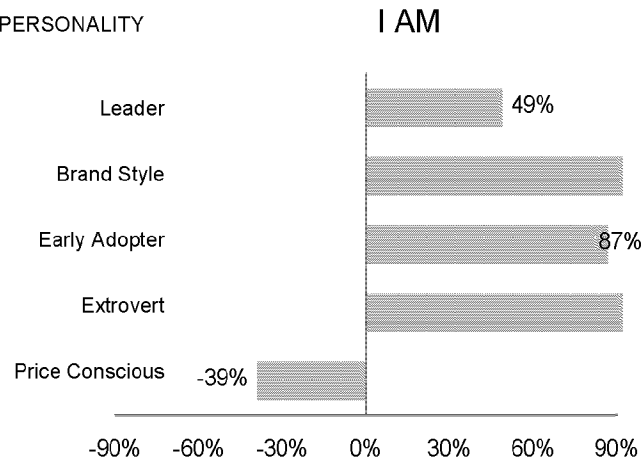
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1. STP Strategy (2/2)



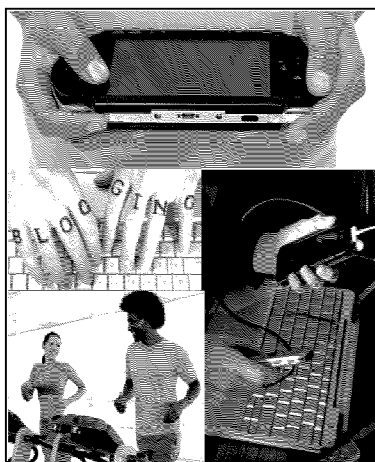
Mobile Pioneers (6%) - lifestyle and personality

PERSONALITY



* % deviation from the average

I LOVE

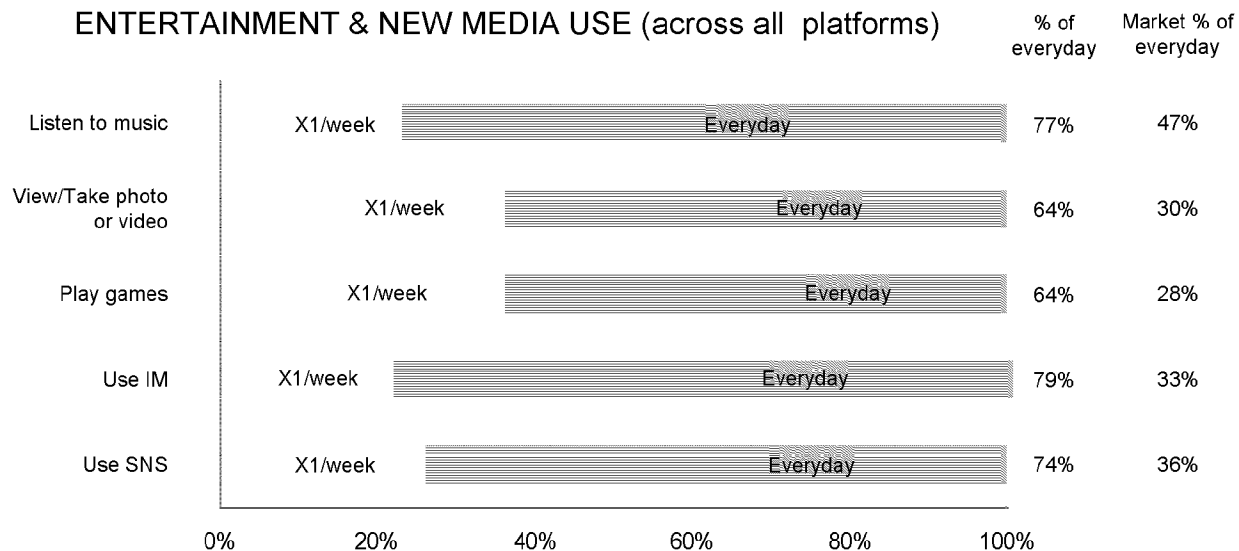


I have a active and exciting life. I am an online shopper, a blogger, a video gamer, a movie junkie, and a sports enthusiast.

I love the power that technology gives me. I can really improve my life. I always adopt new technology when it's first released.

I am a tech geek and an expert. I'm only impressed by genuine innovation and improvement.

ENTERTAINMENT & NEW MEDIA USE (across all platforms)



II. Product Concept & Sales Point – 1. Product Concept Development

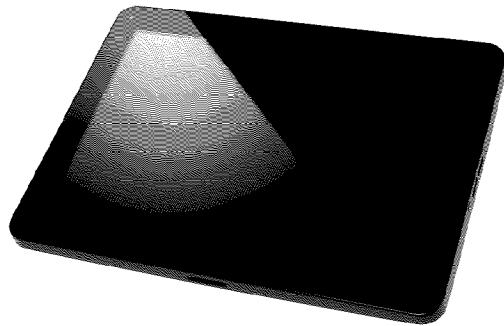
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"Stay Connected with Massive Media" - Google Experienced Device -

"Android Honeycomb Tablet"

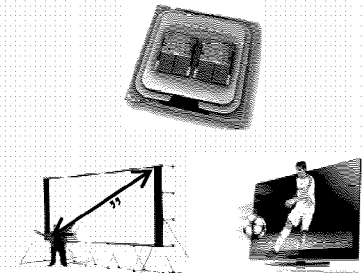
Honeycomb, Dedicated Android version for Tablet
Massive Google Contents & Mobile Services



Honeycomb LTE Tablet

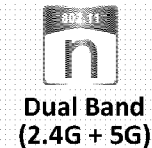
"Optimized Device for Multimedia"

Dual Core CPU : PC-like powerful multitasking
Maximized view experience (10.1" WXGA)
Light & Compact design(8.6mm thickness)



"World First LTE 10.1"

High Speed LTE connectivity
Fastest wireless connection



II. Sales Point – Design

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Design Concept

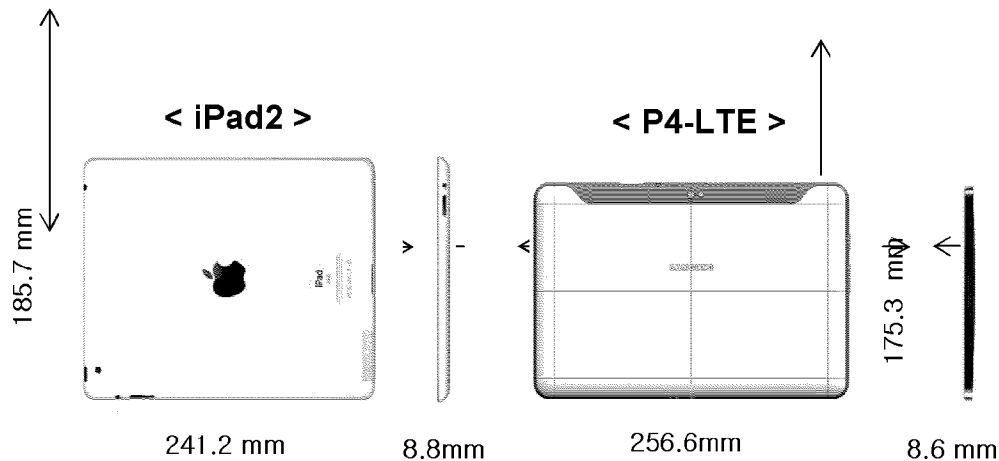
- *Dynamic & Tension Design and Ergonomic Comfortable Grip*
- *Slim & Light for Portability*
- *No front H/W keys for giving 4 way rotating usages (Only Power & Volume keys on left top side)*
- *Wide & Large Touch Display : 10.1" WXGA (1280x800) TFT*

Dimension

- *Wider view with compact size*

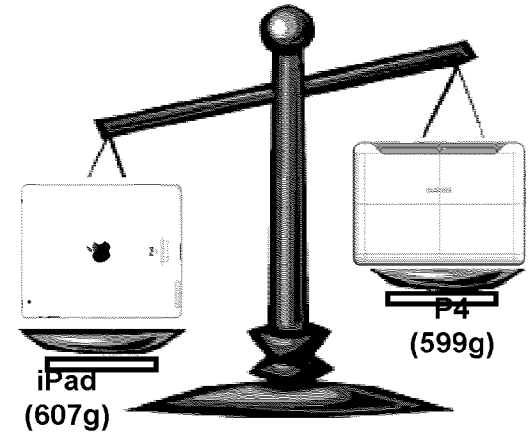
< Thickness : P4 vs iPad >

	P4	iPad
Thickness	8.6mm	8.8mm



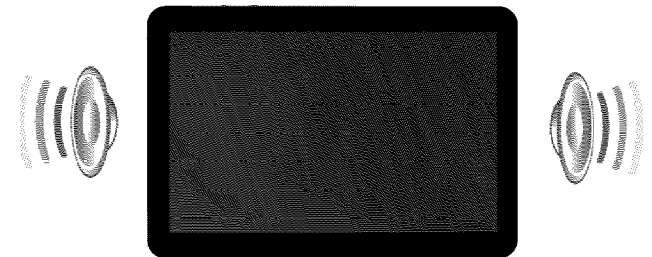
Weight

- *Lighter ever (590g)*



Other Facts

- *Dual speaker for Stereo sound*
- *No front Hard key for 4 way use*



II. Sales Point – Android Honeycomb

✓ **Android Honeycomb Tablet**

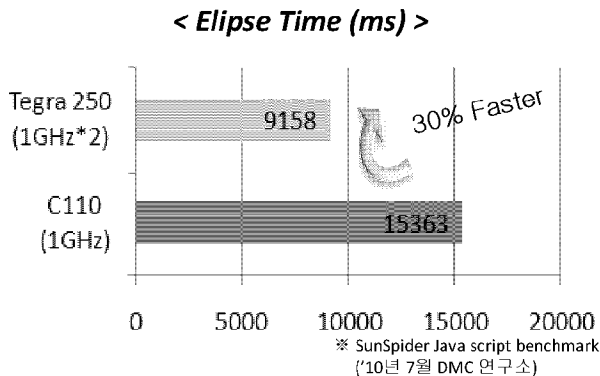
- *Honeycomb, Android Tablet version with dedicated Tablet UX*
 - . *Tablet Home Screen*
 - . *Split screen etc*



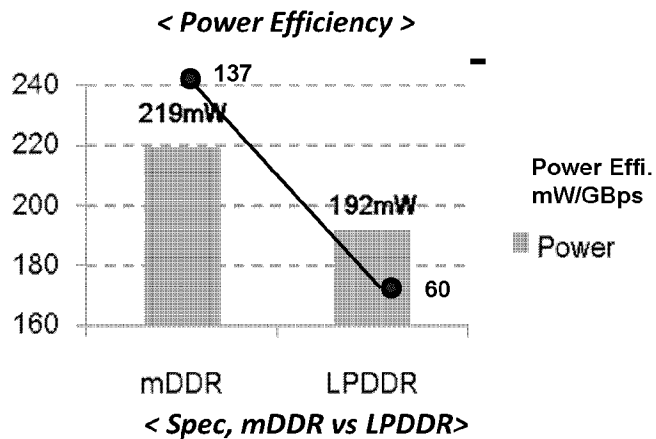
II. Sales Point – Chipset

“ Powerful Chipset ”

- 30% faster speed than single core



- Faster and More power effective



	mDDR (iPad)	LPDDR (P3)
CLK Freq.	~200MHz	~400MHz
Bandwidth	~1.6GB/s	~3.2GB/s

* Clock Speed of LPDDR2 for P3_LTE is 300MHz

* Memory 사업부 자료 ('10년 10월)

“ Faster Web & Advance Services ”

- Faster Web experience

< Web Loading Time >

Sites	C110 1GHz	T20 1GHx2	Rate
Google	1.5 sec	1.1 sec	27%
Yahoo	6.6 sec	4.2 sec	36%
Youtube	4.7 sec	3.5 sec	26%

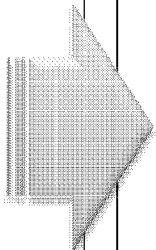
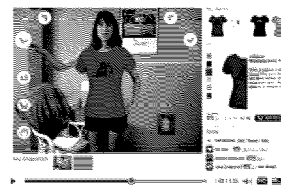
* '10년 7월 DMC 연구소

- Dual core efficiently executes multi-threading

< Split Screen with Multi Threading >



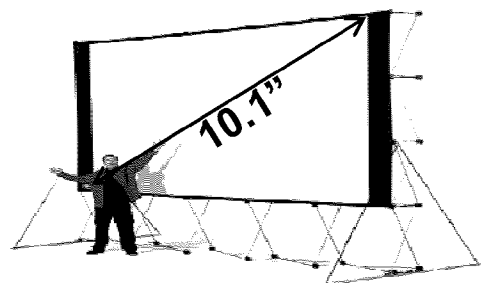
< Augmented Reality with additional information >



II. Sales Point – Display & Others

✓ *Best viewing experience ever*

- Wide view with high resolution (1280x800)



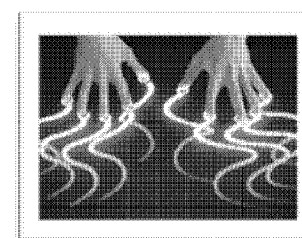
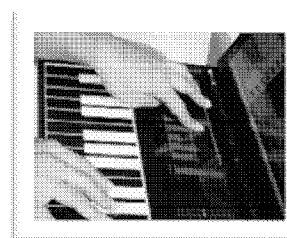
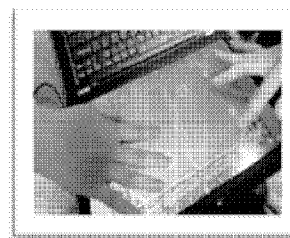
- Fast, Clear, Less Power with PLS TFT LCD

		PLS	VA	TN
Viewing Angle		GOOD	NORMAL	BAD
Contrast Ratio		800:1	900:1	500:1
Response Time	Black to White	20ms	15ms	30ms
	Grey to Grey	25ms	80ms	55ms
BLU Power Consumption (Test w/ 3" WVGA)		320mW	367mW	350mW

※'10년 8월 H/W Platform

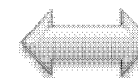
✓ *Easy and fast way to use*

- 10 Finger Multi-touch for
More Creative game scenario
Exclusive theme of application



✓ *Communicate with any devices*

- USB On The Go enables any connection with USB devices

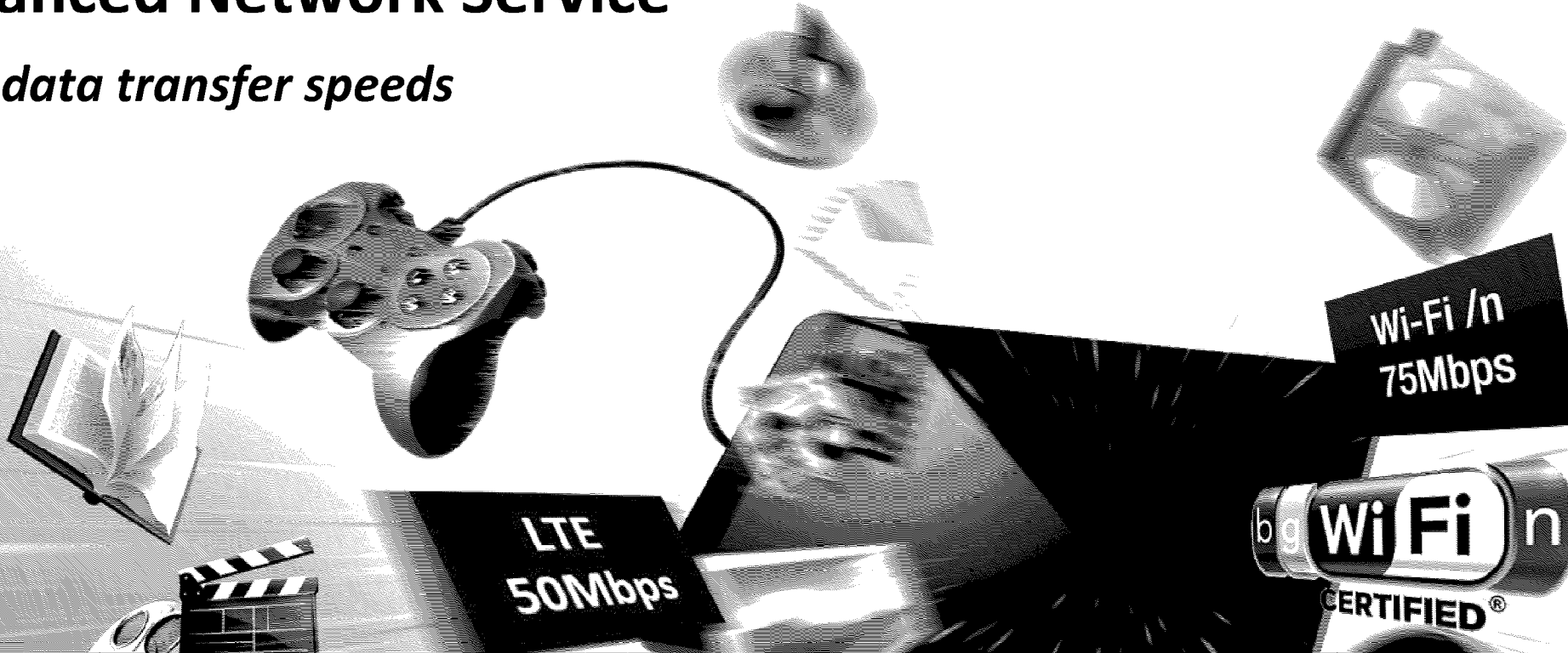


II. Sales Point – Seamless Connection


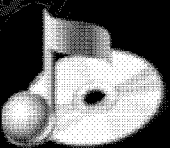


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Advanced Network Service

“Fast data transfer speeds


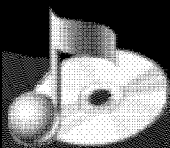




LTE 50Mbps

			
5MB MP3 Song 2 sec	650MB CD	800MB Movie 5 min	

LTE Download

WiFi n CERTIFIED

			
5MB MP3 Song 2 sec	650MB CD	800MB Movie 5 min	

HSDPA Fast Download

* Based on LTE 50Mbps

* Based on HSDPA 21Mbps

III. Product Realization Plan

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1. Project Schedule

	2010	2011					
	Dec	Jan	Feb	Mar	Apr	May	Jun
Design	실장검토 →						
Product Planning	MRD			→			
Standard Approval				→	IOT 3/7 ~ 4/22		
DV				DV W15(4/11)	DWR W15(4/15)	FCC /CTIA 3/20 ~ 4/22	
PV				PV W13(3/29~)	→ PVR W17(4/30)		
PR						PRA W19(5/9)	
TA						TA W20(5/20)	
Shipment						SRA W20(5/20)	★ Launch W23(6/8)

III. Product Realization Plan

3. Project Members

부서		담당 임원	직무
상품기획	PP	한상범 부장	박준호 차장, 서기환 대리
	PM		서기환 대리
	VPS	김종인 상무	김태길 차장, 정창원 대리, 김달원 대리
Enabling		이용배 상무	이용석 차장, 김성철 과장, 김해밀 사원
개발	PM	황정욱 상무	김세열 수석
	PL		박병화 책임
	H/W		
	S/W	권도현 전무 / 김용석 상무	오강환 상무, 박현호 상무 / 김진태 수석
	기구	송현명 전무	백승협 수석, 정상혁 책임
	음향 Lab.	김준태 상무	김경엽 책임, 이병희 선임, 한정은 선임
	안테나	김석호 상무	변준호 수석, 정성태 책임, 박규복 책임, 이희준 선임
	SE 그룹	김태식 상무	신동익 책임, 김호진 선임, 이서영 선임
	디자인	제품	김석근 전무
UX		장동훈 전무	김민경 책임, 이승명 선임, 김준석 선임, 류동석 책임, 이주현 선임
개발관리		고동진 전무	정재훈 과장, 최희찬 대리
영업		변성호 상무	문준기 과장, 박영택 대리
구매		임종권 전무	양경훈 과장, 김민희 대리
MSC			이동석 과장
CS팀(원류품질/신뢰성)		이상규 상무	이종규 과장, 김형중 과장/김용 과장, 권경남 대리, 김은현 대리
제품기술 H/W S/W		하동인 상무 안영준 상무	이창영 부장, 박남수 차장 이동목 부장, 남재후 차장

Appendix

I. Product Specification

1. H/W Specification

Category	Description
B/B Chipset	VIA CBP 7.1
Standard	EVDO Rev A, LTE
RF Band	CDMA/PCS(800MHz/1900MHz), LTE(700MHz)
Additional Chip	Dual Core T20 (1GHz x 2)
Dimension	256.6 X 175.3 X 8.6mm, 590g(TBD)
Display	10.1" WXGA TFT LCD (PLS type)
Camera	3MP AF , 2MP FF
Flash	LED Flash
Memory	RAM : 8Gb LPDDR2, ROM: 16GB/32GB/64GB iNAND
Ex. Memory	microSD (up to 32GB)
Antenna	Integrated Antenna
SIM	Sliding Type, 3V Only
Battery	Li-pol 6800 mAh (내장형)
- Surfing Web	목표치: 10 hours (WiFi) / 9 hours (3G)

Category	Description
Connectivity	WiFi 802.11 a/b/g/n (2.4GHz & 5GHz) BT v2.1 USB 2.0 High Speed
IF Connector	30 pin connector
Speaker	. Size : Dual 15 x 11 x 3.5t 공명 공간 : 1cc 음량 기준 : 신뢰성 65dB . Mono Mic
Ear Jack	Φ3.5 4극
CMF	Front : 강화유리 Main Color : Silver
VPS	Package : Manual, TA, Data Cable Option : Car charger, Keyboard Dock, Desktop Dock
User Benefit	<ul style="list-style-type: none"> - Powerful performance with Dual core CPU - Best Media Experience via 10.1" WXGA PLS TFT - WiFi 802.11a supported - Gyroscope sensor for precise motion detection - Long lasting 6800mAh battery - High speed LTE device

I. Product Specification

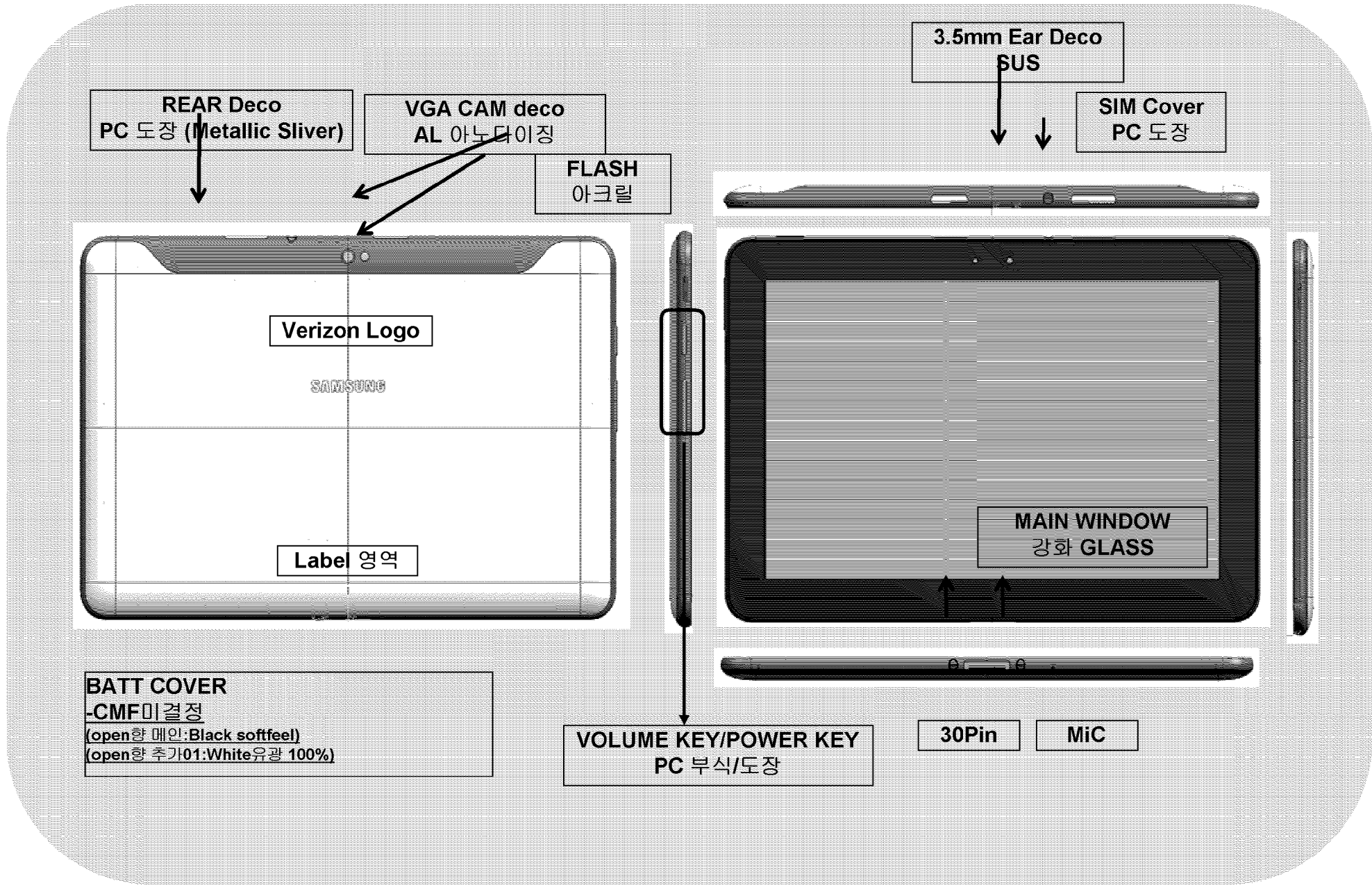
2. S/W Specification

Category	Description
OS	Android Honeycomb
Message	SMS / MMS(OMA v 1.2) E-mail (POP3/IMAP/SMTP) Exchange ActiveSync E-mail (Push e-mail)
Codec	<ul style="list-style-type: none"> ▪ Audio : MP3, OGG, AAC, AAC+, eAAC+, AMR-NB, AMR-WB, WMA, WAV, MID, AC3, IMY, AAC(Mono), AMR_NB ▪ Video <ul style="list-style-type: none"> - Codec : Mpeg4, H.264, H.263, H263Sorenson, Divx/XviD, VC-1 - Format : 3gp(mp4), wmv(asf), avi(divx), mkv, flv ▪ Image : JPEG, PNG, GIF, WBMP, BMP, AGIF
WAP	Android Browser, HTML 5.0 HTTP, OTA provisioning supported Flash 10.2 supported
GPS	A-GPS, S-GPS
JAVA (JSR's)	Android Dalvik
DRM	OMA DRM 1.0 Full (FL, CD, SD)

Category	Description
Bluetooth	<ul style="list-style-type: none"> ▪ Bluetooth v2.1 + EDR ▪ Profile : GAP, SSP, SDAP, A2DP, AVRCP, SPP, OPP, PBAP, HID
Service	Google Contents Service Hubs : MediaHub(MR) B2B Solution(MR) QuickOffice HD, Pulse(RSS Reader)
USB	USB 2.0 OTG
Video	1080p Playback
User Benefit	<ul style="list-style-type: none"> ▪ Enjoy Rich contents with MediaHub ▪ B2B Enterprise Solution

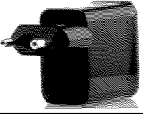





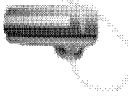
I. Product Specification

3. CMF and Keys



I. Product Specification

4. VPS

	Item	Spec.	Image	Remark	재료비	평가(RP)
Package	Manual (Quick Reference Guide)	-		English 1EA		-
	Detachable Multi TA Header	Micro USB type		Common		-
	TA USB Cable	Micro USB Type		Common		
	Sub Total					-
Option	Keyboard Dock	-		Common		
	Desktop Dock	-		Common		
	Car Charger	Micro USB type				
	USB Data Cable	Micro USB type		Common		
	Bluetooth Headset	BT Headset		Common		

Mobile Pioneers

Deep knowledge

Visionary
Expandability

Work & play hard

Cross platform

Tech confident Synchronize

Being connected

Intelligent
Unlimited

Optimize tech

Fashion indifferent

Internet Interaction speed



I'm passionate about...
Technology
improving my life

Technology is...
endless possibilities

To others I am a...
tech pioneer

My motto is...
always being on

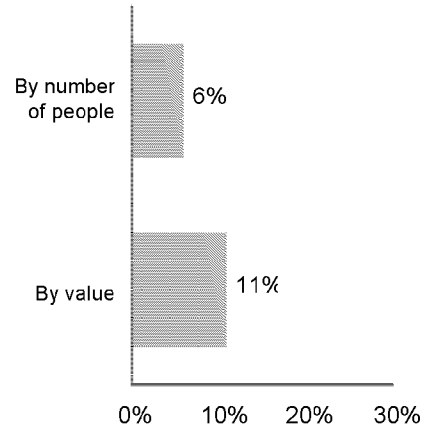


Mobile Pioneers (6%) – demographic profile

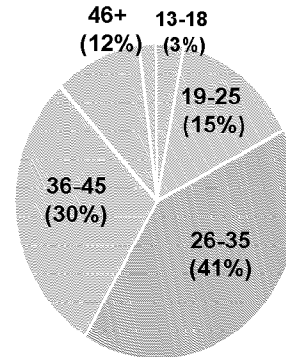
I am deeply interested in technological advances and love using tech in new ways. Technology is a way of improving and speeding up your life and makes things easier and more interesting.



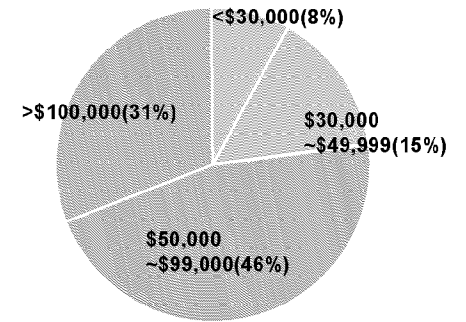
SEGMENT SIZE



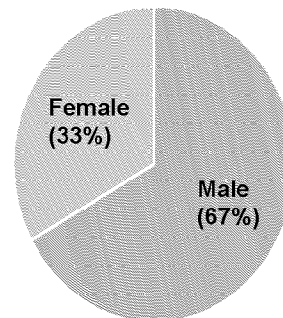
AGE



HOUSEHOLD INCOME



GENDER





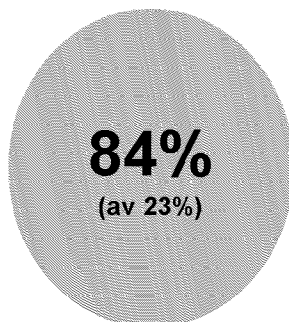
Mobile Pioneers (6%) – product & service needs

Innovative new phones & services that push the limit on existing technology

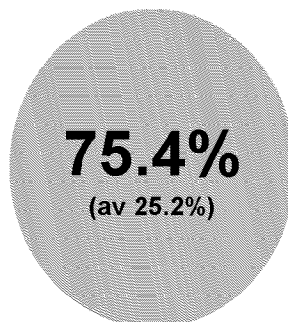
HIGHLIGHTS

Mobile addicted (Always connected) & Big data spenders

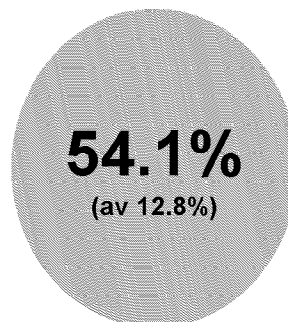
Owns a smart phone



Internet usage via mobile phone (more than once per day)



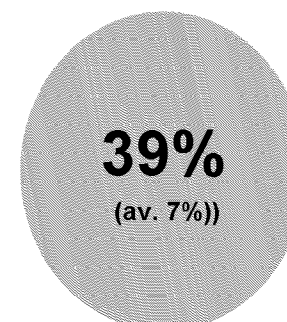
Mobile streaming (more than once per day)



Monthly spend for media, games, and apps.



Sync the phone with other devices everyday



CURRENT USE OF SERVICE AND FEATURE

Heavy monthly service spend. Largest segment of data plan subscribers. Highest smart phone ownership.

SERVICE	Usage	Average
Post-paid	92%	(av 86%)
Monthly spend	\$103	(av \$89)
Voice 300min+	78%	(av 56%)
> 6 SMS/MMS a day	71%	(av 42%)
Unlimited data plan	100%	(av 27%)

CURRENT PHONE	Usage	Average
Multiple phone	54%	(av 32%)
Smart phone	84%	(av 30%) (inc, iPhone 15%)
Touch	34%	(av 13%)
Qwerty	34%	(av 27%)
Touch&Qwerty	30%	(av 14%)

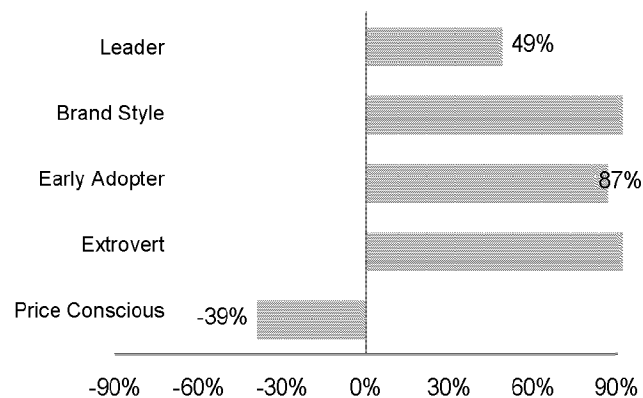


Mobile Pioneers (6%) - lifestyle and personality

I have an active life filled with excitement and entertainment. I hunt down the newest technology and must always be connected to the digital world

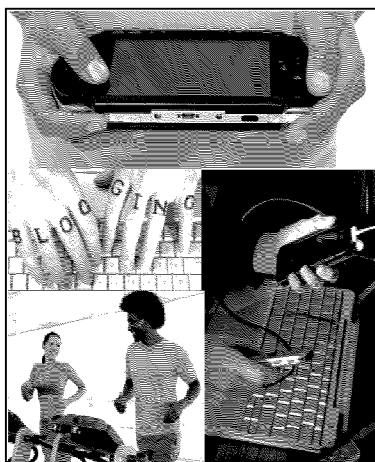
I AM

PERSONALITY



* % deviation from the average

I LOVE

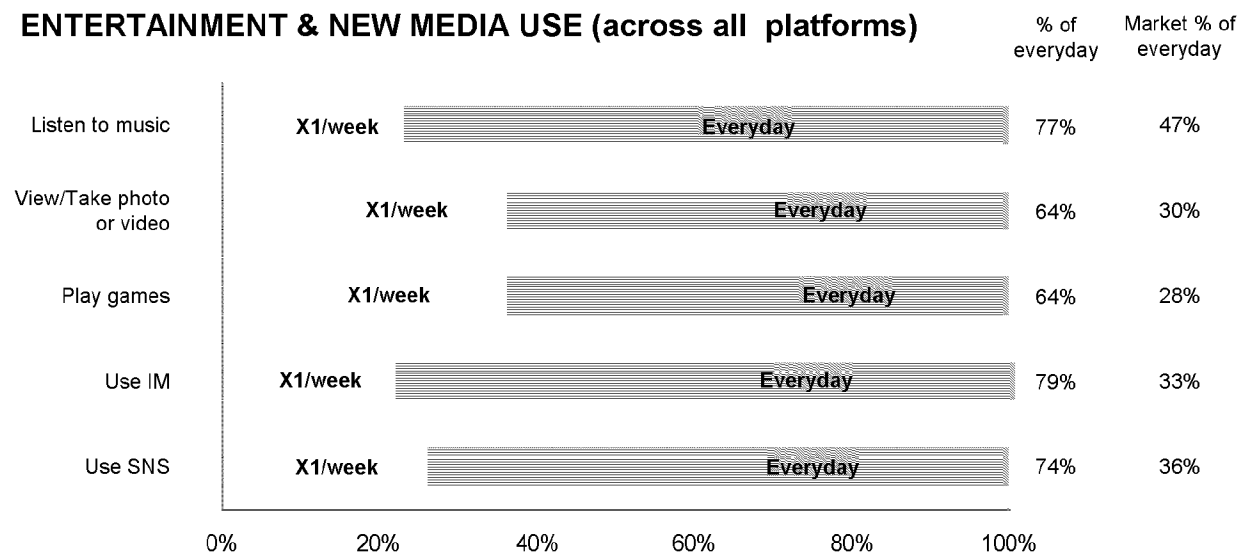


I have a active and exciting life. I am an online shopper, a blogger, a video gamer, a movie junkie, and a sports enthusiast.

I love the power that technology gives me. I can really improve my life. I always adopt new technology when it's first released.

I am a tech geek and an expert. I'm only impressed by genuine innovation and improvement.

ENTERTAINMENT & NEW MEDIA USE (across all platforms)



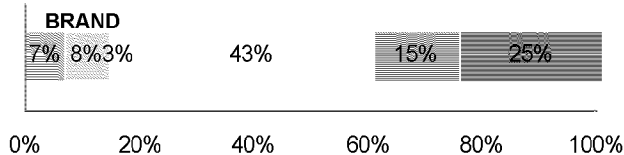


Mobile Pioneers (6%) – detailed usage & attitude

I constantly communicate and get information through phone. I love the infinite adaptability to expand the phone's features through using apps

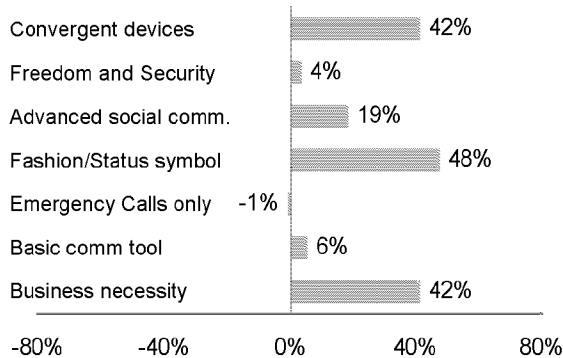
MY CURRENT PHONE

Smart phone: 84% (av 23%) Qwerty: 34% (av 27%) 2-3 MP: 54% (av 33%)
 WiFi: 95% (av 72%) Touch :33% (av13%) 5-8 MP or above: 31% (av 9%)
 Multi SIMs: 36% (av 17%) Touch&Qwerty: 30% (av 14%)



LG (av 21%) Nokia (av 8%)
 Samsung (av 20%) Others (av 19%)
 Motorola (av 18%)
 Blackberry (av 14%)

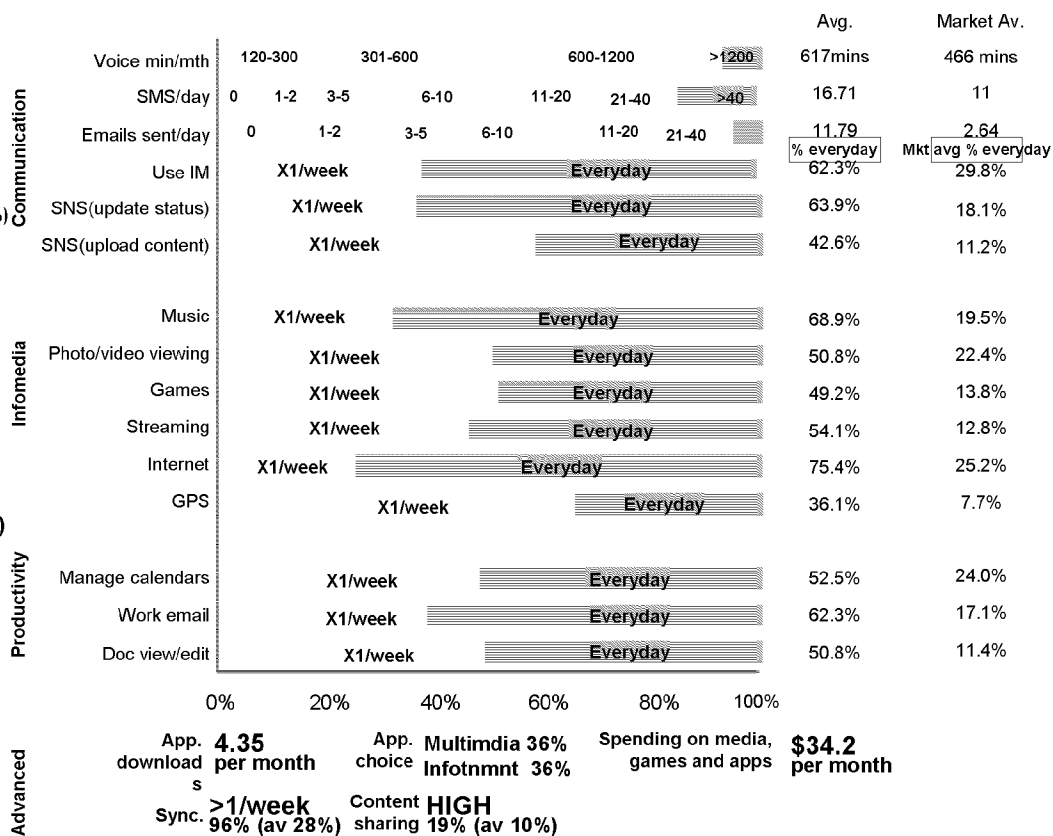
MY PHONE MEANS



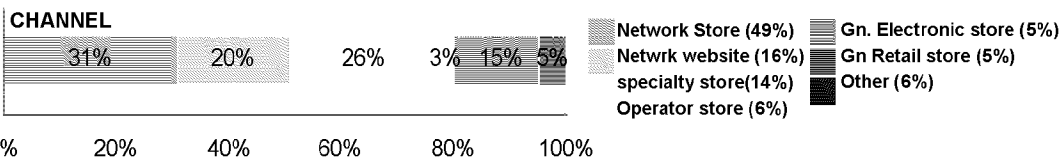
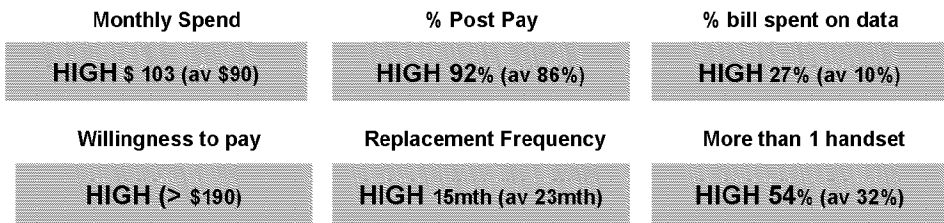
KEY BUYING FACTORS

Data Speed & Access 25% (av 9%)
 User Interface 15% (av 13%)
 Productivity Function 9% (av 4%)
 Expandable Functionality 6% (av 2%)

WHAT I DO WITH MY PHONE TODAY



COMMERCIAL



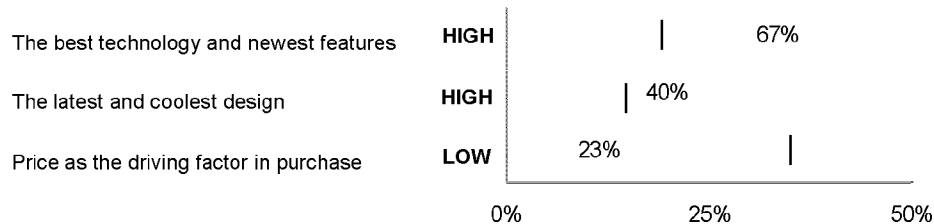
* NOTE: Line shows average across all segments



Mobile Pioneers (6%) – detailed needs & preferences

Full-featured smart phone with the best technology and the coolest design.

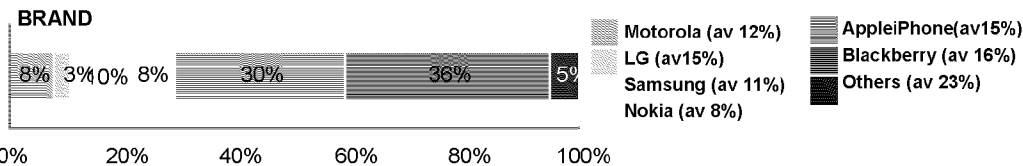
MY NEXT PHONE SHOULD BE



TYPE
Smartphone 93% (av 55%)

OPERATING SYSTEM
Blackberry OS 38% (av 16%)
Window Mobile 25% (av 17%)
Apple OS 18% (av 11%)

INPUT METHOD
Traditional (12 keys): 0% (av 11%)
Touch 18% (av 21%)
Qwerty 34% (av 27%)
Touch & Qwerty 36% (av 41%)

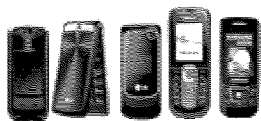


DESIGN

APPEARANCE
Tough or waterproof 84% (av 83%)
Easy to carry 85% (av 89%)
Has a case, clip for easy transport and access 72% (av 56%)

CHROMATIC COLORS

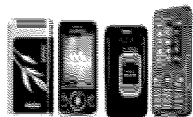
Navy blue 45%
(av 37%)



Aqua Blue 23%
(av 23%)



Red 23%
(av 19%)

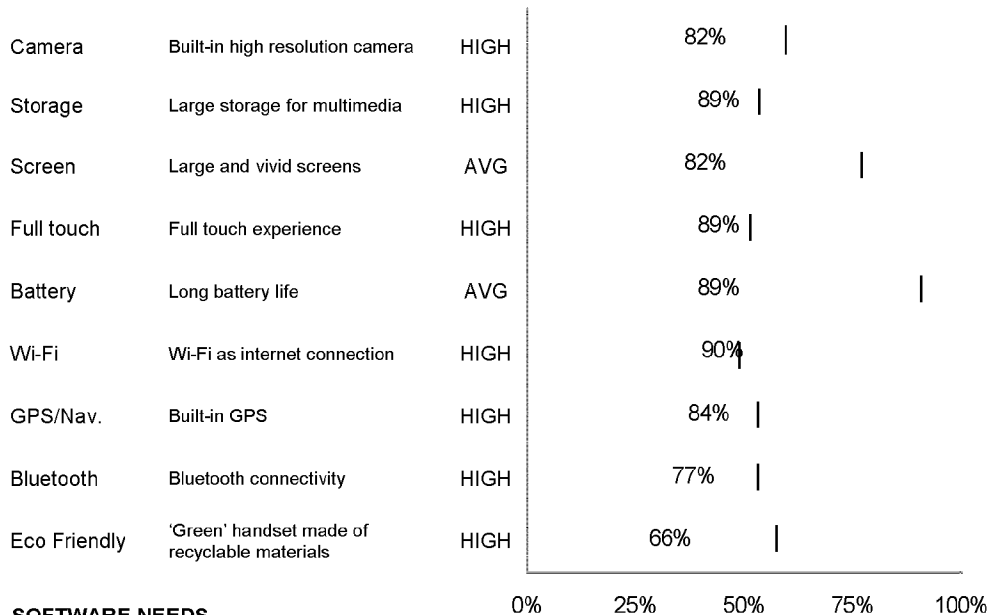


NEUTRAL COLORS

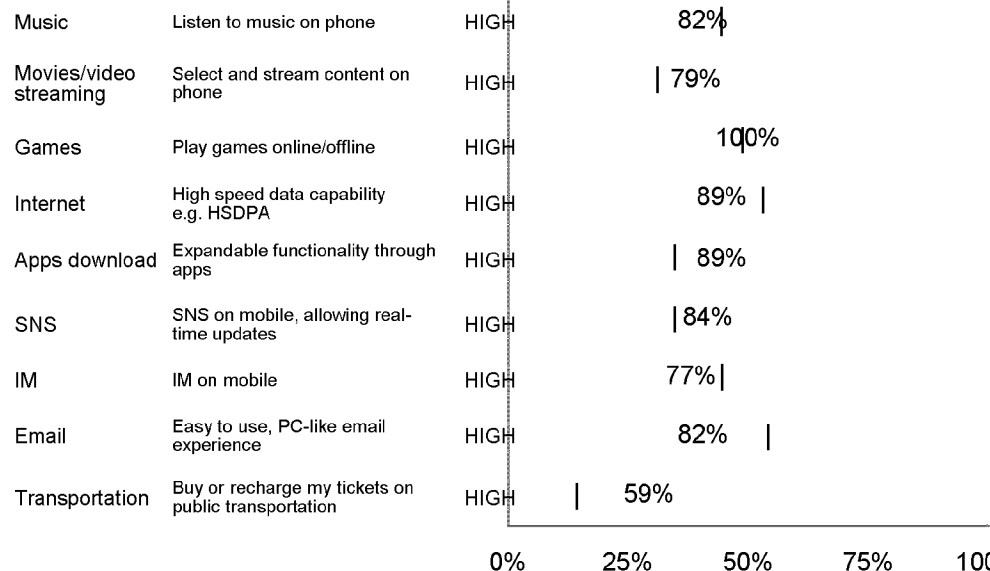
Black 75% (av. 66%)
Silver 8% (av. 16%)
Gray 10% (av. 12%)
White 7% (av. 6%)

FEATURE NEEDS

HARDWARE NEEDS


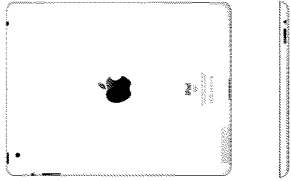


SOFTWARE NEEDS



* NOTE: Line shows average across all segments

VI. Competitiveness Analysis

	P4_LTE	iPad2
Design		
Launch	'11 Jun	'11 Mar
Price(T/P)	LTE : 16GB(\$629)	3G(CDMA) : 16GB(\$629), 32GB(\$729), 64GB(\$829)
AP	nVidia T20 (Cortex A9 1GHz x 2)	A5 (Cortex A9 1GHz)
Dimension	256.6 X 175.3 X 8.6mm, 599g(TBD)	241.2 x 185.7 x 8.8 mm WiFi+3G (607g), WiFi (601g)
Band	CDMA 900/1800 LTE 700MHz Upper C Band	CDMA 900/1800
LCD	10.1" WXGA (1280x800) (PLS)	9.7" XGA (1024x768) (IPS)
Camera + Flash	3MP AF /w Flash, 2MP FF	Front & Rear Cam(VGA)
Battery	6800 mAh (25W, 3.7V)	25W, 3.7V
Memory	. RAM : 1GB LPDDR2 . ROM : 16(Default)/32GB iNand	. RAM : 512MB DRAM . ROM : 16/32/64GB Nand
Connectivity	WiFi a/b/g/n, BT2.1+EDR, GPS, USB2.0 HS	WiFi a/b/g/n, BT2.1+EDR, GPS, USB2.0
OS	Android Honeycomb	iOS 4.3
Sensor	Accelerometer, Light, Compass, Gyroscope	Accelerometer, Light, Compass, Gyroscope
Additional Features	Google Contents & Mobile Services	자석부착식 커버 HDMI Port Accessory

- END -