



GARI 소개

Global Accessibility Reporting Initiative

TTA 정 성 록

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■ GARI(Global Accessibility Reporting Initiative)

- 장애인과 고령자에게 모바일 기기의 접근성 정보를 제공하는 툴
- 제조사들은 GARI를 통해 각국의 접근성 규제 및 법규에 대응
- GARI website (<https://www.gari.info>)를 통해 접근성 정보 제공

■ GARI Key Points

- 다양한 기기의 접근성 정보 제공
 - ☞ Phones, Tablets, Mobile Apps, Wearables, Smart TV
- 접근성이 요구되어지는 다양한 기기에 대한 통합된 정보제공 창구
- 17개국 언어를 제공하는 World Wide Tool 표방
- 1200 개 이상의 기기, 300 개 이상의 Apps 에 대한 접근성 정보 제공 中
- Phone Type의 경우 120 개 이상의 접근성 기능에 대한 정보 제공

2. GARI 역할

EN AR DA DE ES FI FR IT 한국어 NL NO PL PT RO SV 日本語 简体



GARI

GLOBAL ACCESSIBILITY
REPORTING INITIATIVE

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[Learn about Mobile Accessibility](#)

We help consumers to find a device with the accessibility features that work best for them

Why GARI is
Needed

What do you want to find?



Phones

Narrow down and compare options from different manufacturers.



Tablets

Compare the accessibility features you need.



Mobile Apps

Which devices support the accessibility apps you love?



**Connected
Wearables**

Compare options from different manufacturers



Smart TV

Compare the features from different manufacturers

3. GARI 운영 조직 (MWF)

■ MWF(Mobile & Wireless Forum)

- 모바일 및 무선통신(5G, IoT 포함) 기기와 관련된 회원사들로 구성
- 모바일 환경에서의 다양한 이슈에 대한 공동 연구 수행을 위한 단체
- 모바일 및 무선통신 기기의 안전성 및 접근성에 대한 고품질 정보 제공
- 주요 회원사 : Samsung, LG, Apple, Qualcomm, Motorola, Ericsson, Sony, Cisco, Huawei, Intel, TCT Mobile등



4. GARI 실무 그룹 (AWG)

■ AWG(Accessibility Working Group)

- MWF 산하 모바일 기기 접근성 향상을 위한 연구그룹
- GARI 시험 항목 선정 및 GARI운영에 관한 의사결정 그룹
- 세계 각국의 접근성 향상을 위해 법·제도 측면에서 다양한 역할 수행
- 연 2회(3월/10월) 총회 개최 및 주기적 Conference Call을 통해 주요 의사결정
- 회원 구분 : Member(제조사) 및 Non-member Participant(제조사 외)

o Member

- Samsung, LG, Apple, Blackberry, Motorola, Huawei, HMD Global, Sony, Cisco, Intel, Lenovo 등

o Authorized Third Party(ATP)

- Non-member Participant 로 GARI 시험 및 결과 등록 담당
- TTA

Add New Phone Model

Product Brand:

Model:

Do you wish to allow an Authorized Third Party (ATP) to add to, or complete the report for this model?

☒ Yes ☐ No

Please choose from one or more of the following ATP's to access and work on this report:

☒ TTA - Telecommunications Technology Association

Please Note: Once access is permitted, ATP's will have the same rights (to edit and publish) as you - so please ensure that you have agreed with them the limits (if any) of their scope of work.

■ Government

United States: Federal Communications Commission (FCC) Accessibility Clearinghouse

<http://ach.fcc.gov/products-and-services>

Brazil: Agência Nacional de Telecomunicações (Anatel)

http://www.anatel.gov.br/consumidor/index.php?option=com_content&view=article&id=13&Itemid=350

Belgium: Belgian Institute for Postal services and Telecommunications (BIPT)

<http://www.bipt.be/en/consumers/faq/157-where-can-i-find-equipment-appropriate-for-persons-with-disabilities>

France: Autorité de Régulation des Communications Électroniques et des Postes (ARCEP)

<http://www.arcep.fr/?id=9607>

Mexico: Instituto Federal de Telecomunicaciones (IFT)

http://movilesaccesibles.ift.org.mx/catalogo_desktop/app/web/busqueda.php

■ Industry

United States: Cellular Telecommunications Industry Association (CTIA)

<http://www.accesswireless.org/Find/Gari.aspx>

UK: Vodafone

http://www.vodafone.com/content/sustainability/operating_responsibly/accessibility.html

Mexico: Telefónica México

<http://www.telefonica.com.mx/rc-sostenibilidad/transparencia-y-dialogo/nos-importa-mexico>

Australia: Telstra

<http://telstra.com.au/mobile-phones/find-accessible-devices>

Australia: Australian Mobile Telecommunications Association (AMTA)

<http://www.amta.org.au/pages/GARI>

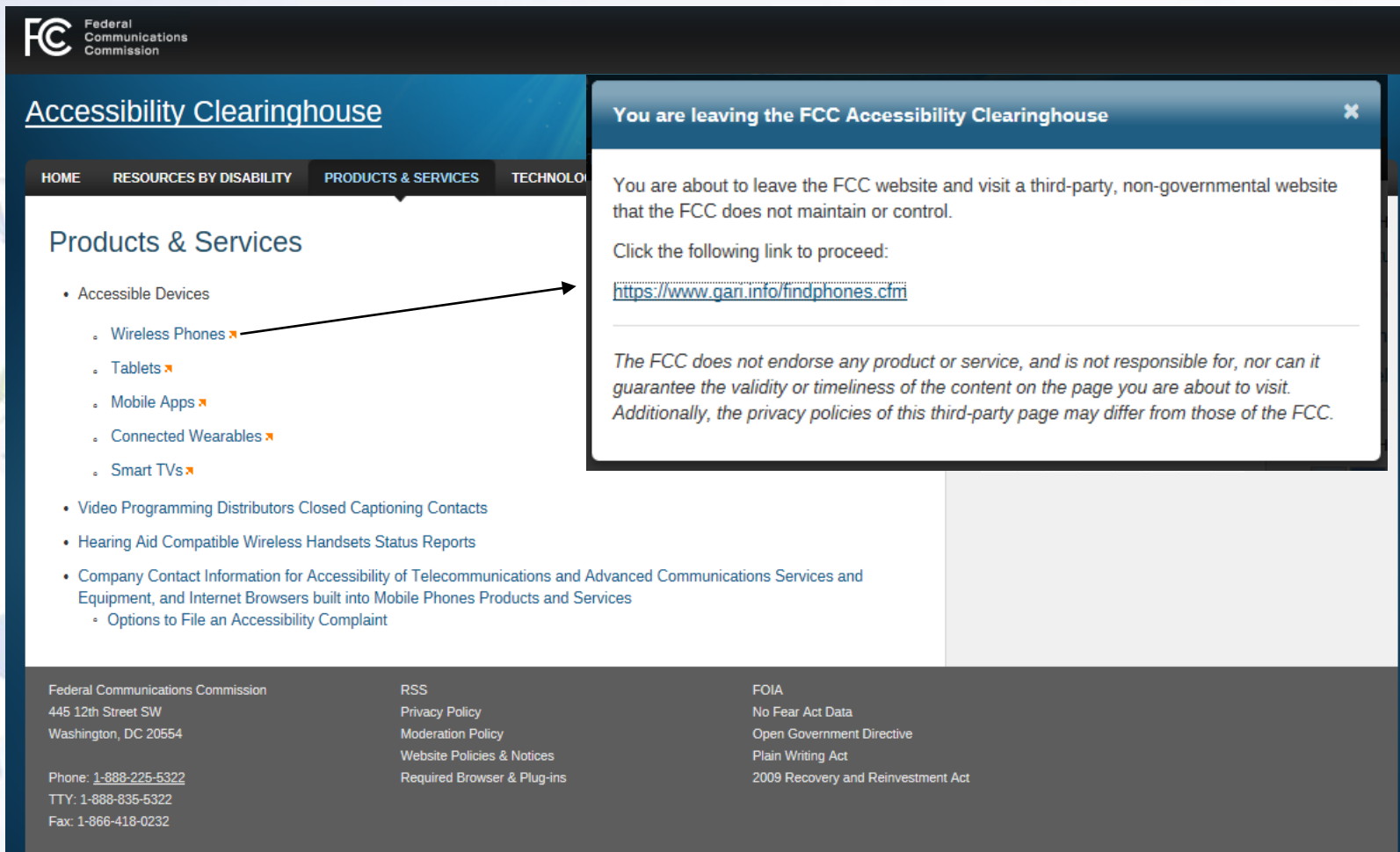
<http://www.mobiletips.org.au/pages/Access>

Canada: Canadian Wireless Telecommunications Association (CWTA)

<http://wirelessaccessibility.ca>

6. GARI 대표 이용 사례 (FCC)

- United States :
 - FCC : GARI is used for accessibility clearing house



The screenshot shows the FCC Accessibility Clearinghouse website. The header includes the FCC logo and the text 'Federal Communications Commission'. The main navigation bar has links for 'HOME', 'RESOURCES BY DISABILITY', 'PRODUCTS & SERVICES', and 'TECHNOLOGY'. The 'Products & Services' section is active, displaying a list of categories: 'Accessible Devices', 'Video Programming Distributors Closed Captioning Contacts', 'Hearing Aid Compatible Wireless Handsets Status Reports', and 'Company Contact Information for Accessibility of Telecommunications and Advanced Communications Services and Equipment, and Internet Browsers built into Mobile Phones Products and Services'. Under 'Accessible Devices', there are sub-links for 'Wireless Phones', 'Tablets', 'Mobile Apps', 'Connected Wearables', and 'Smart TVs'. An arrow points from 'Wireless Phones' to a warning box on the right. The warning box states: 'You are leaving the FCC Accessibility Clearinghouse. You are about to leave the FCC website and visit a third-party, non-governmental website that the FCC does not maintain or control. Click the following link to proceed: <https://www.gari.info/findphones.cfm>. The FCC does not endorse any product or service, and is not responsible for, nor can it guarantee the validity or timeliness of the content on the page you are about to visit. Additionally, the privacy policies of this third-party page may differ from those of the FCC.'

Federal Communications Commission
445 12th Street SW
Washington, DC 20554
Phone: 1-888-225-5322
TTY: 1-888-835-5322
Fax: 1-866-418-0232

RSS
Privacy Policy
Moderation Policy
Website Policies & Notices
Required Browser & Plug-ins

FOIA
No Fear Act Data
Open Government Directive
Plain Writing Act
2009 Recovery and Reinvestment Act

7. GARI Report 이용 사례

■ United States :

- Section 255/ Section 508 Compliance Report via GARI

GLOBAL ACCESSIBILITY REPORTING INITIATIVE (GARI) MOBILE HANDSET/DEVICE REPORT - SECTION 255 / SECTION 508 REPORT

Name of Device:	A4
Were Section 255 and 716 accessibility requirements included as part of commencement?	Yes
Date of commencement of product design or of software update (for any updates that may impact ACS):	15 July 2015
Manufacturer:	GARI Admin



SECTION 255 COMPLIANCE REPORT

IV. ACCESSIBILITY REVIEW

Criteria	Answer	Relevant Device Features	Explanation (including any compatibility with existing peripheral devices or specialized customer premises equipment)
a) Operable without vision. Provide at least one mode that does not require user vision.	Yes	Key Identification Backlight for Keypad Standard Number Key Layout Key Feedback - Audible	

SECTION 508 COMPLIANCE REPORT

Section 1194.21 Software Applications and Operating Systems – Detail Voluntary Product Accessibility Template Applicable to Converged Devices Only

Criteria	Answer	Relevant Device Features	Explanation
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Yes		
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Yes		

8. GARI Website (1)

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[Home](#) > [Find Accessible Devices and Apps: Phones & Tablets](#)

Find Accessible Devices and Apps: Phones & Tablets



Find Phones & Tablets

Compare features from different manufacturers.



Find Mobile Apps

Which devices support the accessibility apps you love?

Device suitable for...

- ☐ Dexterity
- ☐ Vision
- ☐ Hearing/Speech
- ☐ Cognition

☒ Phones ☐ Tablets

Region

[Let's see some devices](#)

Phone / Tablet Lookup

Already know what you're after?
Find phones and tablets in the database.

Region:

Manufacturer

Model

☒ Phones ☐ Tablets

[Lookup Devices](#)

Advanced Feature Search

Let us help you find the right device for your needs.
Select on a feature-by-feature basis.

[Start advanced search](#)

9. GARI Website (2)

Results: 384 Region: North America

[Modify Search Criteria](#)

% **Match** indicates the degree to which the features of the device match your search criteria.

Choose up to three devices to compare their features

[Compare Phones](#)

| [Page1](#) | [Page2](#) | [Page3](#) | [Page4](#) | [Page5](#) | [Page6](#) | [Page7](#) | | [Page20](#) | [>](#)



Samsung SM-G935R4
☒ Compare



Coolpad Americas Coolpad Rogue
☒ Compare



Sony Xperia Z3+
☒ Compare



Samsung Galaxy J3 POP(SM-J327R4)
☐ Compare



Samsung SM-G891A
☐ Compare



Samsung SM-G890A
☐ Compare

10. GARI Website (3)

Device Comparison



Find Phones & Tablets

Compare features from different manufacturers.



Find Mobile Apps

Which devices support the accessibility apps you love?

[Back to search results](#)

[Print friendly page](#)

Device Comparison

Compare Devices

See how the devices you picked stack up against each other...



Samsung SM-G935R4



Coolpad Americas Coolpad Rogue



Sony Xperia Z3+

HARDWARE & SYSTEM INFORMATION

	Samsung SM-G935R4	Coolpad Americas Coolpad Rogue	Sony Xperia Z3+
Display Characteristics - Main Display Size	5.5 inches	4 inches	5.2 inches
External Keyboard Support	Yes	No	Yes
Supports ability to install third party applications or apps.	Yes	Yes	Yes
Internet Capability	Yes	Yes	Yes
Display Characteristics - Screen Flicker	Yes	Yes	Yes
Display Characteristics - Main Display Resolution	2560 x 1440 pixels	800 x 480 pixels	1080 x 1920 pixels
Display Characteristics - Main Display Size	121.6 x 68.5 mm	126.5 x 64.4 mm	64 x 114 mm

11. GARI 시험 분야



주요 Accessibility Features

Hardware (외관)

- Main display size
메인 스크린 크기
- External keyboard
외부 키보드 호환
- Display Resolution
지원되는 화면 해상도
- Anti-slip feature
미끄럼 방지 기능 지원
- Key Identification
키 간 구별 가능 정도
- Touch screen
터치 스크린 지원

Vision (시각)

- Voice Assistant
스크린리더 기능
- Magnification gesture
화면 확대/축소 기능
- Color adjustment
화면 색상 설정 기능
- Voice Command
음성 명령 App 실행
- Automatic answering
전화 자동 수신 기능
- Vibration feedback
키 입력 시 진동 구별

Hearing Speech (청각/언어)

- Hearing aids
보청기 호환 기능
- Google subtitles
영상 자막 지원 설정
- Extra volume
음량 크기 최대치 설정
- TTY mode
텍스트 폰 지원
- Video Conference
Hangout 이용 화상회의
- Visual Indicator
Email, IM, SMS 등 알림

Dexterity (운영)

- Stylus pen
터치펜 사용 가능
- Universal switch
손동작 이용 화면 조정
- USB Type-C
앞뒤 구별 없이 연결
- Predictive text
단어 예측 입력
- One-hand operation
한 손 사용 가능

Cognition (인지)

- Voice Notes
간단한 음성 녹음
- Simple Instructions
간편 사용자 매뉴얼
- Simple Reminders
쉬운 용어 경고 표시
- No Screen Timeout
사용자 입력 대기

13. GARI 시험 항목 예시 (1)

Supports Gesture Based Navigation

- You can use simple gestures to enter text or navigate your device (e.g., Back, Home)

- ① Swipe 동작 확인 (Zoom in/out 동작, Swipe 동작으로 페이지 이동 등)
 - ② Settings → Language and input → On-screen keyboard → Samsung Keyboard → Keyboard swipe controls → Swipe to type 선택 후, QWERTY 키보드 위에서 Swipe로 Text 입력 가능
- ※ Gesture Based Navigation : Touch or Touchless gesture 로 단말과 Interaction 할 수 있는 기능

External Switch/ Pointer Support

- You can connect an external switch or use head and/or eye movements to move the focus or pointer on the device's screen

- ① Bluetooth - on 하여 ablenet Blue2 BT Switch 연결 후,
Accessibility → Switch Access → on 으로 설정 후에 각 스위치에 동작 키 지정하여 사용 가능 여부 확인
- ② Accessibility → Dexterity and interaction → Universal switch → Add switch → Camera 를 통해 머리, 눈, 입의 움직임으로 action 선택 후, Universal switch - on 하여 사용 가능 확인

Voice recognition for accessing features

- Allows you to activate features by speaking commands into the phone, reducing the need to use the keypad

'Google Voice Search' 또는 Voice commander 를 이용해 전화, 메시지, 알람 등을 음성 명령으로 실행 확인 (e.g. "Call Michael", "Send a message to Michael", "Set alarm", "Turn on Bluetooth" 등 음성 명령 수행)

High contrast mode

- The phone comes with at least one high contrast mode

- ① Accessibility → Vision → High contrast fonts - on : 글자 폰트 아웃라인 설정 효과 확인
- ② Accessibility → Vision → High contrast keyboard - on : 키보드 고대비 효과 확인
- ③ Accessibility → Vision → Negative colors - on : 전체 화면 고대비 효과 확인
- ④ Accessibility → Vision → Show button shapes - on : 버튼 테두리 표시를 통해 영역 구분 효과 확인

14. GARI 시험 항목 예시 (2)

Voice output of caller ID from contacts list

- When you receive a call, it speaks the caller's name if it is stored in your contact list

- ① Accessibility → Vision → Voice Assistant - on 설정
- ② Contacts에 저장된 사람으로부터 MT call 수신 시 해당 Caller Name 읽어주는지 확인
(cf. 일부 단말의 경우, Caller Name 을 읽어주지 않고, Incoming call 이라고만 읽어주는 경우 발생)

Two-way Video Communications

- Allows you to make video calls in which you can see the other person and they can see you using your wireless LAN network (or mobile networks)

- ① Wi-Fi 연결 후 'Google Duo', 'Hangout', 'Skype' 를 이용하여 양방향 Video Call 수행 확인
- ② 3G /4G network 연결 후 'Google Duo', 'Hangout', 'Skype' 를 이용하여 Video call 수행 확인
- ③ 'Phone' app 의 Video call 을 이용하여 Video call 수행 확인

Visual Indicators on Display Volume Control

- The display shows the current volume level

- ① 통화 중 볼륨키를 조절할 경우, In-call volume level이 Screen에 Display 됨을 확인
- ② 오디오 play 중 볼륨키를 조절할 경우, Media volume level이 Screen에 display 됨을 확인
- ③ Sounds and vibration → Volume 에서 Ringtone, Media, Notifications, System volume level이 Display 확인

Visual Alerts Battery

- Displays a visual alert to tell you when the battery is running out or when it is recharging

- ① Low battery(15% 이하) 시 'Battery power 15%' 팝업 창으로 Visual Alerts 표시하는지 확인
(cf. Settings → Display → Status bar → Show battery percentage - on 일 때 Battery 잔량 수치(%) 표시됨)
- ② Charger 연결 시, 상단 Status Bar의 Battery 아이콘 안에 충전 중임을 표시 하는지 확인

15. GARI 신규 항목 (1)

Real-Time-Text Capability

● The device supports real-time-text (RTT) capability

- Text 작성/전송 과정을 거치지 않고, 메시지 입력 창에 Text Typing 즉시 대화 창에 표시되어 실시간 문자대화 가능
- ※ RTT 는 Network Dependent 한 기능으로 현재는 미주 지역 망에서만 RTT 기능 가능함

Are the class results out yet ? I left
© 3:35 pm

Yea, there's a lineup bu

Yea, there's a lineup bu |



Personal Assistant / Voice Control

● The device provides a personal assistant that can help the user carry out functions

- 기존 항목은 음성을 이용한 전화/메시지의 송수신, 기능의 단순한 실행 여부에 초점
- Personal Assistant를 이용해 Device의 설정 및 Application의 세부 기능 실행 가능
- Samsung : Bixby, Apple : Siri, Google : Voice Search, Microsoft : Cortana, Amazon : Alexa

Haptic Feedback

● The device supports a tactile feedback system which uses different forces and vibrations to let the user know that a function has been carried out.

- 기존 항목은 물리적 버튼을 눌렀을 시 촉각적인 Feedback의 제공의 여부에 초점
- Haptic Feedback은 Touch Screen에서의 User와 Device간의 상호작용에 초점
- Haptic Feedback 관련 설정 지원 및 기능에 따른 진동 세기 / 진동 패턴 설정 가능 여부

Mono Audio

● The device allows for both channels of audio to be routed to one single earpiece

- Stereo Audio는 Audio Channel에 서로 다른 Sound를 조합하여 입체음향효과를 냄
- Mono Audio는 모든 Audio Channel에 동일한 Sound를 전달
- Accessibility → Hearing → Mono Audio 설정 가능

16. GARI 신규 항목 (2)

Text-To-Speech / Dictation

● The device converts what the user says into text

- TTS : 텍스트를 음성으로 변환 시키는 시스템
- Dictation : 사용자의 음성을 인식하고, 단어나 문장을 똑같이 Text로 변환하는 시스템
- SMS/IM과 같은 Messaging App에서 사용자의 음성을 Text로 변환해 주는 Dictation 기능 지원

Flashlight Notifications

● The device can be configured to alert the user to notifications through flashing light

- 전화/SMS/Mail 등의 수신 시 LED Flash를 이용한 Visual Alert을 제공하는 기능
- Notification 이 필요한 Application의 설정에서 Flashlight Notifications 설정 지원

Allows for sign language communication

● Does the device screen support at least 20 frames per second?

- 영상통화 시 수화의 원활한 식별을 위해, 최소 초당 20 Frame 이상을 제공해야 함
- 일반적으로 24~30 FPS(Frame per seconds) 에서 부드러운 움직임을 인지할 수 있음
- 영상통화 시 평균 20 FPS 이상 지원 필요

Manufacturer custom overlay of OS

● The device runs a customized manufacturer overlay of the operating system

- Android 기반 단말의 경우, 운영 체제 상위 레이어에서 실행되는 제조사 오버레이 제작 및 적용 가능
- 오버레이는 Android 모양과 느낌을 변경 하거나, OS 에서 지원하지 않는 기능을 추가하는 것
- 주로 OS 에서 제공하는 화면 위에서 동작하는 대화창, 팝업창, 위젯, 메뉴 화면 등

Annex 1. GARI 항목(H/W INFORMATION)

FEATURE	DESCRIPTION	
HARDWARE INFORMATION		
Display Characteristics - Main Display Size	Size of the main display-(diagonal in inches)	대각선 화면 크기 (Inch 단위)
External keyboard support	You can connect an external keyboard to the device.	외부 키보드 연결이 가능한가?
Supports ability to install third party applications or apps.	You can install third party applications for example from an approved application store.	3rd Party Apps 다운로드 가능 확인
Internet Capability	You can use the phone to browse websites and use other internet-based services.	인터넷 접속이 가능한가?
Display Characteristics - Screen Flicker	The main display does not flicker at a rate that could cause problems for people with photo-epilepsy (between 2 Hz and 60 Hz)	초당 2~60 번 깜박임 제공하면 안됨
Display Characteristics - Main Display Resolution	The number of dots (called pixels) used to display text and images on the main display. More dots means more detail.	화면 해상도(세로 X 가로) pixel 단위
Display Characteristics - Main Display Size	Size of the main display-(dimensions in millimetres)	화면 크기(Height x Width) mm 단위 (Inch 사용금지)
Backlight for Keypad	Keys light up so the numbers and labels are easier to read	backlight 유무
Differentiation of Function Keys	The number keys have a different colour or shape from the other keys, making them easier to tell apart by touch or by sight	숫자키들과 다른 기능키를 구분
Lanyard Pin for key ring or Lanyard Strap	Has a small bar allowing a key ring or neck strap (lanyard) to be attached	스트랩이나 끈등을 휴대폰에 연결할 수 있는 별도의 핀
Ease of Opening for Clam Shell/Flip Phone/Slider	Can be opened using one hand (only relevant for phones that have to be opened - 'clam shell', 'flip' or 'slider' designs).	한 손으로 open 이 가능
Anti-slip features	Has a non-slip coating or ridges to prevent it slipping out of your hand	미끄럼을 방지
Keypad Layout	The keypad is laid out like a QWERTY typewriter keyboard	자판 배열 Qwerty 지원 유무

Annex 2. GARI 항목 (H/W INFORMATION)

FEATURE	DESCRIPTION	
HARDWARE INFORMATION		
Key center point distance	What is the distance from the centre point of one alpha-numeric key to another?	각 키의 중앙부터 다른 키 중앙까지의 이격거리
Key Identification - Discernment	How each key is made easy to distinguish from the surrounding keys. Either by (1) being physically separate, (2) having ridges between them, or (3) some other way.	(1) being physically separate - 키간 이격
Key Identification	Each key can easily be distinguished from the surrounding keys, reducing the chance that you will press the wrong one.	각 키들이 다른 키와의 구분
Easy to Press Keys	Keys on the keypad are easy to press	터치 스크린 유무
Easy Battery Placement	Is Battery clearly marked for proper orientation/placement	배터리 장착에 오삽방지
Touch Screen - Heat Activated	If the device has a touchscreen, is it capacitive (sometimes referred to as heat activated	정전식(정전용량식)
Touch Screen	Does the device have a touch screen?	터치 스크린 유무
Headset - plug type	The type of plug a headset will need to have so that it can be connected to the phone	Headset 연결 타입
Headset - plug connected	You can plug in a headset containing headphones and a microphone. This allows you to answer calls, listen, and talk without holding the phone. This can mean better call quality for some people and is useful if you have trouble holding a phone.	Plug Type의 Headset 지원 여부.
Standby Time / Talk Time	The number of days the battery will last when the phone is switched on but not being used (standby time). The number of hours it will last while you are making calls (talk time).	Standby time / Talk time
Handset weight	Weight including battery.	휴대폰 무게 (g 으로 표기)

Annex 3. GARI 항목 (MOBILITY / DEXTERITY FEATURES)

FEATURE	DESCRIPTION	
MOBILITY/DEXTERITY FEATURES		
Supports Gesture Based Navigation	You can use simple gestures to enter text or navigate your device (e.g., Back, Home)	Swipe (zoom in/out 포함) 동작 ※ Gesture Based Navigation : Touch or Touchless gesture
Stylus or Prosthetic Device support	Do buttons and screen respond to a prosthetic device, pointing device or stylus? A prosthetic device is an artificial device that serves as a replacement for a body part.	Stylus 또는 S-pen 과 같은 장치 지원
External Switch / Pointer Support	You can connect an external switch or use head and/or eye movements to move the focus or pointer on the device's screen	외부 스위치, Universal Switch 지원
Visible Focus Indicators	Visible indicators are used to highlight the user interface control with current focus	Focus가 highlight
Voice recognition for accessing features	Allows you to activate features by speaking commands into the phone, reducing the need to use the keypad	Voice Command (Google Voice Search)
Hand Movement	Controls do not require you to pinch or twist them with your fingers, or rotate your wrist	한 손 사용 가능 여부
Voice Recognition for Dialing	Allows you to dial a number by speaking the person's name, if it is stored in your contact list (a personal 'telephone book' you create in your phone)	Voice Dialing (Google Voice Search)
Any key answering	Can the user answer the call by pressing any key?	특정 키 할당 - 전화 수신
Automatic Redial	You can set it to automatically redial if the number you called is busy or unavailable.	Auto redial 지원 여부
Automatic Answer	You can set it to answer all calls automatically without you having to do anything.	Automatic answering 지원 여부
Flat Back for Table Top Operation	Has a flat back, so it can be used while it is lying on a table	테이블 위에서의 조작

Annex 4. GARI 항목 (MOBILITY / DEXTERITY FEATURES)

FEATURE	DESCRIPTION	
MOBILITY/DEXTERITY FEATURES		
Device Coupling - Other	Allows customised devices to work with the phone. Device can be connected to the phone by using other connections then those described above	BT/WLAN/Usb cable 제외한 연결 방법 (e.g. NFC, MHL(Mobile High-Definition Link))
Device Coupling - Bluetooth/WLAN	Allows customised devices to work with the phone. Device can be connected to the phone by using Bluetooth/wireless LAN (radio signals which travel through the air and may also be able to pass through walls or other solid objects)	BT/Wi-Fi 연결 지원
Device Coupling - Infrared	Allows customised devices to work with the phone. Device can be connected to the phone by using infrared signal (which travels through the air like a radio wave but cannot pass through walls or other solid objects)	적외선 리모콘 앱 확인 (IR Remote Control)
Device Coupling - Cable	Allows customised devices to work with the phone. Device can be connected to the phone by using a cable (an electrical wire)	Usb cable 연결
Guarded/Recessed keys	Individual keys are recessed or guarded in some way to reduce the chance that you will press the wrong key	오목하거나 분리돼 있는 키 (Touch screen 은 N/A)
Predictive Text Input	Helps you write text messages more quickly by predicting words from the first few letters you type.	단어예측 방식 지원 여부
Text Messaging Service Capable	Can all the text message features supported be read, composed and sent using the phone's screen and/or keypad	SMS 지원 여부
Speaker-phone capable	Hands free operation during dialling and after call initiated	스피커폰 지원 여부

Annex 5. GARI 시험 항목 (VISION FEATURES)

FEATURE	DESCRIPTION	
VISION FEATURES		
Audible Cues - Enhancements	Makes a sound when an accessory is connected or disconnected.	엑세서리(Headphone) 연결 시 소리
Audible Cues - Charging	Makes a sound when the battery/device has reached full charge or when you tab on the battery icon.	배터리 완충 시 소리
Screen Reader	A mode in which onscreen information is made available via text to speech and the device is operable without vision	TalkBack, Voice Assistant
Screen Magnifier	Does the screen magnifier enlarge all views, including the web?	화면확대 (Magnification gestures, Zoom)
Braille Display Support	Does the device support a braille display?	점자 디스플레이 지원 (Focus 14 Blue Braille Display)
Web browser Zoom	You can magnify web content when using the internet browser	브라우저에서의 화면확대 (Magnification gestures, Zoom 설정)
Speed dial	You can assign speed dial short cut keys to your contacts	Speed dial 지원
Support Accessibility APIs	API's allow accessibility software programs to communicate with the device (although there may be some limits).	Android Accessibility API 지원
High contrast mode	The phone comes with at least one high contrast mode	적어도 한 개 이상의 고대비 모드가 있는가?
Display Characteristics - Symbols/Icons	Menus can be displayed using symbols or pictures in a grid layout. This can make them easier for some people to understand or remember	App/Menu 틀이 아이콘 또는 그림으로 구성
Display Characteristics - Colour Differention.	The information presented on the display does not rely on colour perception for understanding (e.g. you do not have to be able to distinguish red symbols from green symbols)	Grayscale/Color adjustment 지원
Display Characteristics - Backlight for Display	The display lights up to make it easier to read in the dark	Brightness On 상태 여부
Display Characteristics - Adjustable Brightness Control	You can adjust the brightness of the display to make it easier to read	Brightness 조절 가능 여부
Voice output of caller ID from contacts list	When you receive a call, it speaks the caller's name if it is stored in your contact list	TalkBack, Voice Assistant → Caller ID
Voice output of SMS: inbuilt	Can read text messages out loud to you	TalkBack, Voice Assistant → SMS
Display Characteristics - Adjustable Contrast Control	You can adjust the contrast of the display to make text and symbols easier to see against the background	고대비 효과 지원 Negative colors, High contrast Keyboard
Voiced Menus	Speaks the menu options, allowing you to access functions even if you cannot read the display	TalkBack, Voice Assistant

Annex 6. GARI 항목 (VISION FEATURES)

FEATURE	DESCRIPTION	
VISION FEATURES		
Ring Tone Variations	You can set it to use different ring tones for different people when they call you	연락처 저장 시 원하는 링톤 설정
Voice Recognition for Dialing or Accessing Features	Voice Commands can be used for dialing or accessing features on the phone.	Voice Command (Google Voice Search)
Personalized Shortcuts	You can assign a particular feature to a single key or a short key sequence	Direct access (Home key, Power key 이용)
Automatic Features - Automatic Answer	Does the phone support automatic answering of calls?	Automatic answering
Adjustable Font - Size	You can make the text on the display larger or smaller to make it easier to read	Font size 조절
Adjustable Font - Style	You can change the font (typeface) used for the text on the display, which may make it easier to read	Font style 변경
Audible Cues - Volume	Is there a audible cue to indicate a change in the volume level?	볼륨 레벨 변경시 인지 가능 여부
Audible Cues - Calls	If another call comes in while you are still on a call, it makes a sound to tell you there is a Call Waiting.	Call waiting 지원
Audible Cues - Power	Makes a sound when you press the power on/off button, so you know it's been pressed.	전원 버튼 눌림 소리 제공 (e.g. Screen lock sounds)
Audible Cues - Battery	Makes sounds to tell you when the battery is running out or when it is recharging.	Low battery 시 / 충전기 연결 시 소리 제공
Audible Identification of Keys - Functions	The sounds you hear when you press a key are different for number keys and function keys, so you can easily tell them apart	Function key 소리와 키패드(쿼티,숫자) 소리 구별
Audible Identification of Keys - Spoken	When you press a number key the number is spoken out, so you know you have pressed the correct one.	TalkBack, Voice Assistant → 숫자 키 입력 소리 제공
Key Feedback - Audible	When you press a key it makes a sound, so you know it has been pressed	Touch / Dialing keypad / Keyboard Sound 설정
Key Feedback - Tactile	When you press a key you can feel a physical click, so you know it has been pressed	진동 Feedback 설정
Standard Number Key Layout	The number keys are laid out in the standard way with 1 2 3 at the top and * 0 # at the bottom	Keypad 의 1 2 3... * 0 # 키 구성 지원
Tactile Key Marker - '5'	The number '5' key has a raised dot or bump on it so you can distinguish it by touch	5' 키에 돌기가 있어 위치 인식 (Touch screen 의 경우 N/A)
Tactile Key Markers - 'F' & 'J'	The 'F' and 'J' keys have raised dots or bumps on them so you can distinguish them by touch (only relevant for phones that have a QWERTY typewriter-style keypad)	쿼티 자판의 'F', 'K' 키에 돌기가 있어 위치 인식 (Touch screen 의 경우 N/A)

Annex 7. GARI 항목 (HEARING / SPEECH IMPAIRMENT)

FEATURE	DESCRIPTION	
HEARING/SPEECH IMPAIRMENT FEATURES		
"Hearing Aid or ""HAC"" Setting for Telecoil Mode"	The device has a user setting designed to reduce issues related to interference buzzing for hearing aid users in telecoil mode. Does not guarantee total clarity.	Hearing Aids (T-Coil Mode) 잡음 감소 설정 메뉴
Adjustable Vibrating Alerts	Allows users to select different vibration settings for various notifications.	여러 Notification에 대해 각각 다른 진동 패턴 설정
Supports Closed Captioning for Web Video or Streaming	Device is capable of displaying closed captioning that is included in a video or video stream.	비디오 재생 시 Subtitle(CC) 제공
Front Facing Camera	Allows the front facing camera to be used in signing or two-way video conferencing.	양방향 화상통화 (전면카메라)
Adjustable Maximum Volume Control	Allows you to change default volume control limit	기본 설정된 음량 세기 변경 가능 (Extra volume)
Two-way Video Communications - using wireless LAN networks	Allows you to make video calls in which you can see the other person and they can see you using your wireless LAN network	양방향 화상통화 (Wi-Fi 이용)
Two-way Video Communications - using mobile networks	Allows you to make video calls in which you can see the other person and they can see you using your mobile network	양방향 화상통화 (이동통신 이용)
Visual Alerts - Electronic Message	When a text, e-mail or IM comes in, it displays a visual alert to indicate it has been received	문자/e-mail/IM 수신 시 시각적 표시
HAC Rating	Does the device meet the ANSI HAC standard (with M3 or M4, and T3 or T4 ratings) when tested on US frequency bands?	HAC Rating (M3/T4)
Text phone/TTY compatibility	This product is compatible with the Textphone/TTY for the deaf	TTY mode 지원 여부 (Ultratec Compact/C 사용)
Call Logs	Lists all the calls you have dialled, received or missed.	수발신 및 부재중 이력
Ringer Volume Adjustable	You can adjust the ringing volume to make it louder or quieter.	수신 벨 소리 조절
Key Feedback - Displayed	When you press the number keys the number is displayed on the screen so you can check that it is correct before dialling.	전화 번호 입력 시 번호 display
Hearing Aid T-coil Coupling	The device is able to connect with a sufficiently immune hearing aid in "Telecoil mode" without significant interference buzzing noise. Does not guarantee total clarity.	T-coil Hearing Aids 지원
Video Conferencing	Whether Two-way Video Conferencing is supported.	양방향 Video Conference 지원
SMS Personalisation and Reuse	Allows you to create standard text messages that you can quickly send to anyone without having to retype them each time. For example, "I'm in a meeting, I'll call you back"	상용구문 추가/수정/삭제 (SMS - Quick responses)
Messaging Options - Predictive Text	Helps you write text messages more quickly by predicting words from the first few letters you type.	단어 예측 방식 지원 (Predictive text)

Annex 8. GARI 항목 (HEARING / SPEECH IMPAIRMENT)



FEATURE	DESCRIPTION	
HEARING/SPEECH IMPAIRMENT FEATURES		
Messaging Options - MMS	You can send and receive multimedia messages, which can include photographs, audio and video clips	MMS(photo, audio, video) 지원
Messaging Options - IM	You can send and receive 'instant messenger' (IM) messages.	IM(Instant messenger) 지원
Messaging Options - Email	Whether email is supported.	E-mail 지원
Messaging Options - Text Messaging/SMS	You can send and receive text messages.	SMS 송수신 지원
Visual Indicators on Display - Enhancements	Whether there is a visual indicator on the display to indicate whether any enhancements are connected (Loopset, Headset or TTY/Textphone)	Headset, Loopset, TTY 등 연결 시각적 표시
Visual Indicators on Display - Line Status	Whether there is a visual indicator on the display to indicate the line status (i.e on-line)	On-line / Off-line 상태 시각적 표시
Visual indicators on Display - Voice Mail	When someone has left a voice mail message, it displays a visual alert.	Voice Mail 수신 시 시각적 표시
Visual Indicators on Display - Volume Control	The display shows the current volume level.	볼륨 설정 시 현재 볼륨의 세기 시각적 표시
Visual indicators on Display - Network	The display shows what type of network you are connected to (e.g. 3G/LTE or WiFi).	네트워크 연결 상태 (2G/3G/4G) 시각적 표시
Visual Indicators on Display - Battery	The display shows the current battery strength and the network signal strength.	배터리 용량과 네트워크 신호의 세기 시각적 표시
Visual Alerts - Incoming Calls	When a call comes in, it displays a visual alert, such as the caller's name or photo if it is stored in your contact list	전화 수신 시 발신자 정보(사진, 이름) 표시
Visual Alerts - Other	Whether there are other visual alerts /text displays that are not mentioned above.	그 밖의 화면상 시각적 표시 (기타 App 의 Notification 설정)
Visual Alerts - Battery	Displays a visual alert to tell you when the battery is running out or when it is recharging.	Low battery 시 시각적 표시 충전기 연결 시 시각적 표시
Visual Alerts - Power	When you press the power on/off button a visual alert is shown (e.g. a light), so you know it's been pressed.	Power on/off 시 화면 backlight on/off
Vibrating alert	The phone can be set to vibrate when it receives a call or text message or when it gives a warning alert	전화 수신, 문자, 경고음 등 진동 설정
Improved Call Quality	Can the device be adjusted to improve call quality against ambient noise?	Noise reduction 설정 가능 여부

Annex 9. GARI 항목 (COGNITION / ADDITIONAL FEATURES)

FEATURE	DESCRIPTION	
COGNITION FEATURES		
Voice Notes	Allows you to record, save and play back a short voice reminder.	Voice Recorder, Voice Memo 지원
Simplify Display	Allows you to disable or conceal unneeded features/programs or icons.	아이콘, 프로그램 숨김 또는 제거 가능
GPS Capability	The device has Global Positioning System (GPS) capability.	GPS 설정 지원
Copy and Paste	Does the device support a copy and paste functionality for text entry?	Copy/Paste 기능 지원
Simple Instructions	Instructions and messages that are displayed on screen use simple language.	Simple 용어를 사용한 매뉴얼 또는 가이드 지원
Photo Associated Telephone Book	You can add photos of people next to their numbers in your contact list (a personal 'telephone book' you create in the phone).	연락처 별 사진 저장
Assistance Instructions	When you need to provide input (e.g. when setting up the phone or when it asks you a question), extra helpful instructions are provided, explaining what you need to do.	입력에 대한 도움말이나 예제 제시
Simple Reminders	All text alerts and other reminders that are displayed on the screen use simple, easy to understand language.	Simple 한 용어를 사용한 Notification 또는 Pop-up 표시
No Screen Timeout	When the phone displays an alert or a question that requires you to give an answer, e.g. by clicking a "Yes" or "No" button or by typing in your PIN number, it will wait for your response. This can be helpful for people who find it difficult to decide what to answer or to enter the answer quickly.	User input 을 요하는 모든 Pop-up 창은, 사용자 입력 전까지 대기
ADDITIONAL FEATURES		
Any Other Additional Features	Additional features that may benefit people with disabilities (i.e the possibility to connect additional accessories such as external keyboard or devices for synthesizing voice)	장애인을 위한 추가 기능
Alternative format User Manual	The User Manual is available in alternative formats	별도 대체 형식의 매뉴얼을 제공
OPTIONAL ACCESSORIES		
Related accessories that may also benefit people with disabilities.		In box 에서 제공하는 액세서리 외 기타 장애에 도움이 되는 액세서리 지원 여부

Annex 10. GARI 시험 기자재



FOCUS14 Braille Display



Blue2 Bluetooth Switch



Ultratec Compact/C
Portable TTY Phone



T-Coil Hearing Aid





감사합니다