SONY

White paper

February 2016

Xperia™ X Performance

F8131

Purpose of this document

Sony product white paper are intended to give an overview of a product and provide details in relevant areas of technology.

NOTE: The illustration that appears on the title page is for reference only. All screen images and elements are subject to change without prior notice.

Document history

Version		
February 2016	First released version	Version 1

Sony Mobile Developer World

For the latest technical documentation and development tools, go to *www.sonymobile.com/developer.*

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- 5” HD curved class display with a seamless metal back
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23 MP main camera with Predictive Hybrid Autofocus

The Xperia™ X Performance features Predictive Hybrid Autofocus, which predicts the next motion and lets you capture action and movement in a bright, blur-free shot. You select a focus object and your camera tracks it automatically as it moves. The focus stays clear and keeps your subject sharp. Our fastest camera yet goes from standby to capture in less than 0.6 seconds. With quick start up, Predictive Hybrid Autofocus and faster image processing, you can capture the most spontaneous moments.

13 MP front camera for low-light selfies

Now you can capture low-light shots with both cameras. Want to take a selfie at a party, or maybe capture the details of a beautiful cityscape at night? With the Xperia™ X Performance you get clear, sharp shots even in low light.

5” HD curved glass display with a seamless metal back

The Xperia™ X Performance has a curved glass display that covers the full width of the phone. With a full-width display, the screen size is maximized without having to make the phone any bigger. Everything you see is more vivid on this Full HD display with Sony’s built-in BRAVIA® TV technologies.

Snapdragon 820 processor with super performance

With the latest Snapdragon 820 processor and Cat9* connection speeds, the Xperia™ X Performance brings you uninterrupted entertainment with the fastest connectivity – without unnecessary buffering or stuttering.

** Available in markets with Cat9.*

Facts – dimensions, weight, performance and networks

Operating system	Google™ Android™ TBD (Marshmallow)
Processor	2.2 GHz / 1.6 GHz Qualcomm MSM8996 Quad Core 64-bit
GPU	Adreno 530
Size	144 x 70 x 8.7 mm (TBD)
Weight	165 grams (TBD)
Available colours	White, Graphite Black, Lime Gold and Rose Gold
SIM card	Nano SIM
Main screen	
Colours	16,777,216 colour TFT
Resolution	Full HD 1080x1920 pixels
Size (diagonal)	5.0 inches
Scratch-resistant	Yes
Input mechanisms	
Text input	On-screen QWERTY keyboard
Touch screen	Capacitive
Touch gesture	Yes – multi-touch, up to 10 fingers supported
Memory	
RAM	3 GB
Flash memory	Up to 32 GB*
Expansion slot	microSD™ card, SDXC supported**
Memory card speed class	Class 10***
Memory card UHS speed class	Class 1***
Camera	
Camera resolution	23 MP
Digital zoom	8x
Clear image zoom	5x
Photo flash	Yes
Video recording	Yes
Front Camera	Yes - 13 MP front camera with Sony Exmor RS™ for mobile sensor (1080p)

ISO (Main Camera)	ISO 3200 maximum in manual mode
	ISO 12800 maximum in Low Light mode for photos
	ISO 4000 maximum in Night scene mode for video
Minimum focus distance	120 mm
Sensors	
Accelerometer	Yes
Ambient light sensor	Yes
Barometer sensor	Yes
eCompass™	Yes
Game rotation vector	Yes
Geomagnetic rotation vector	Yes
Gyroscope	Yes
Magnetometer	Yes
Step counter	Yes
Step detector	Yes
Significant motion detector	Yes
Proximity sensor	Yes
Networks	
F8131	UMTS HSPA+ 800 (Band VI), 800 (Band XIX), 850 (Band V), 900 (Band VIII), 1700 (Band IV), 1900 (Band II), 2100 (Band I) MHz GSM GPRS/EDGE 850, 900, 1800, 1900 MHz LTE (Bands 1, 2, 3, 4, 5, 7, 8,12,13,17,19, 20, 26, 28, 29, 38, 39, 40, 41)
Data transfer speeds	
GSM GPRS	Up to 107 kbps
GSM EDGE	Up to 296 kbps
HSUPA (upload)	Cat 6, up to 5.76 Mbps
HSDPA (download)	Cat 24, up to 42.2 Mbps
LTE Cat 9	Up to 50 Mbps (upload), up to 450 Mbps (download)
Battery performance	
Talk time (GSM)	Up to TBD ****
Standby time (GSM)	Up to TBD ****
Talk time (UMTS)	Up to TBD ****
Standby time (UMTS)	Up to TBD ****

Standby time (LTE)	Up to TBD ****
Music listening time	Up to TBD ****
Video playback time	Up to TBD ****
Battery (Embedded)	2700 mAh minimum

** Memory comprises approximately 12 GB of firmware, plus 20 GB of "Internal storage" for music, pictures and movies, and downloaded applications and their data. For more details about memory, see "Memory in Android™ devices" on page 18.*

*** SDXC theoretically can support up to 2TB card. However, 200 GB is the largest capacity of microSD card available in the market as of January 2016.*

**** This device meets the minimum hardware requirements to support Class 10 / UHS Speed Class 1 Flash memory. Flash memory performance is dependent on the application and task being performed on the device. If you would like to know about your memory card, refer to the technical specifications that came with the card.*

***** Values are according to GSM Association Battery Life Measurement Technique as performed in controlled laboratory conditions. Actual time may vary.*

NOTE: The battery performance may vary depending on network conditions and configurations, and device usage.

NOTE: The performance metrics are all measured under laboratory conditions.

Categorised feature list

Call

Answering machine*
Noise suppression
Smart call handling

Messaging

Email
Multimedia messaging (MMS)
Text messaging (SMS)

Applications

Facebook™ application*
Introduction to Xperia™
Lifelog
Media Go™
What's new
Xperia™ Companion
Xperia™ News*
Xperia™ Lounge*

Entertainment

Movie creator
PlayMemories
PS4™ Remote Play
Reader mode*
Sony Entertainment Network*

Organiser

ActiveSync®
Airplane mode
Alarm clock
Calculator
Contacts
Queue background data
Setup guide
Sketch
Smart cleaner
STAMINA Mode
Stopwatch
Timer

Google

Gmail™*
Google Calendar
Google Chrome™*
Google Drive
Google Docs, Sheets and Slides
Google Photos
Google Play™*
Google Play Movies & TV
Google Play Music
Google™ search*
Google Voice™ Search*
Google voice typing
Google Maps™ for Mobile with Street view*
Google Wallet™*
Hangouts™*
Smart Lock
YouTube™*

Camera

- Photo

23 MP camera with Sony Exmor RS™ for mobile image sensor****
24 mm wide-angle****
Hybrid Auto focus****
Quick Launch****
Flash/Pulsed LED****
Flash/Photo light****
Red-eye reduction****
Touch capture
Superior Auto
Image stabiliser
Geotagging
Self-timer
8x digital zoom****
5x clear image zoom****
Smile Shutter™
Object tracking****
HDR
Scene recognition
White balance
13 MP Front-facing camera with Sony Exmor RS™ for mobile image sensor***

- Video

Auto focus
Front-facing camera (1080p)***
Geotagging
8x digital zoom****
Smile Shutter™
Object tracking****
SteadyShot™
Scene recognition
Video recording
Color & Brightness

- Add-on applications

AR Effect
Creative effect
Face in picture
Sound Photo
Sticker Creator
Sweep Panorama
Timeshift video

Music

3D Surround Sound (VPT)
Album art
Automatic headset compensation
ClearAudio+
Clear Bass™
DSEE HX**
Dynamic normalizer
Low power audio playback**
S-Force Front Surround
Bluetooth® stereo (aptX®, A2DP, LDAC)
Hi-Res Audio (LPCM, FLAC, ALAC, DSD)
Hi-Res Audio via 3.5 mm audio jack and USB
Stereo speakers
TrackID™
Music application

Connectivity

aGNSS
Bluetooth® 4.2 wireless technology
Cast
Device Connection
DLNA Certified™
HDCP
Media Transfer Protocol support
Micro USB support
MirrorLink
NFC
Screen mirroring
USB charging
USB Connection mode
USB High speed 2.0 support
USB Host
Wi-Fi®
Wi-Fi® Hotspot functionality
Wi-Fi CERTIFIED Miracast™

 **Text Input** Gesture input* Handwriting recognition for Japanese Keyboard On-screen QWERTY keyboard Predictive text input	 **Display** Auto rotation Glove mode Screenshot capturing Smart backlight control Super-vivid mode TRILUMINOS™ Display for mobile X-Reality™ for mobile	 **Hardware** 3.5 mm audio jack Digital Noise Cancelling (DNC) Fingerprint sensor* Live Color LED

** This service is not available in all markets.*

*** This feature is only available when you play music using the Music application.*

**** This feature is only supported by the front camera.*

***** This feature is not supported by the front camera.*

Technologies in detail

The information presented in this section is a general overview of the technology incorporated into the product. However, hardware and software levels of compliance to standards and specifications vary between products and markets. For more information, contact Sony Mobile Developer World or the relevant Sony representative.

Accessibility and Usability

Talkback*	Yes
Captions*	Yes
Magnifications gestures*	Yes
Large Text*	Yes
High Contrast Text*	Yes
Power button ends call*	Yes
Auto-rotation*	Yes
Speak Passwords*	Yes
Accessibility Shortcuts*	Yes
Text-to-speech output*	Yes
Touch and hold delay*	Yes
Color Inversion*	Yes
Color correction*	Yes
Hearing Aid Compatibility (HAC)	Yes
Teletypewriter (TTY)**	Yes

** Android Marshmallow feature. Subject to possible change in future releases of Google™ Android™.*

*** The TTY feature is for deaf or hearing-impaired users.*

Device-to-device communications (local)

Bluetooth® wireless technology

Bluetooth® profiles supported	Advanced Audio Distribution Profile v1.2 Audio/Video Remote Control Profile v1.3 Device Identification Profile v1.3 Generic Access Profile Generic Attribute Profile Client/Server over LE General Audio/Video Distribution Profile v1.2 Handsfree Profile v1.7 (Wide band speech) Headset Profile v1.2 HID over GATT Profile v1.0 Human Interface Device Profile, Host role v1.0 Messaging Access Profile v1.2 Object Push Profile v1.2 Personal Area Networking Profile v1.0 Phonebook Access Profile v1.1 Serial Port Profile v1.2
Core version and supported core features	Version 4.2 Bluetooth Low Energy
Other supported features	aptX® CD quality audio streaming over Bluetooth® LDAC High sound quality audio streaming over Bluetooth®
Connectable devices	Products that support at least one of the Bluetooth® profiles listed above. Bluetooth® 4.2 accessories generally require the installation of a supporting application.

More information:

www.sonymobile.com/developer

www.bluetooth.com

Wi-Fi®

Supported standards	IEEE 802.11a/b/g/n/ac MIMO and Wi-Fi® Wi-Fi Direct™, Wi-Fi Protected Setup, Wi-Fi CERTIFIED Passpoint™, Wi-Fi CERTIFIED Miracast™
Connectable devices	Wi-Fi® compatible devices Wi-Fi® access points Wi-Fi Direct™ compatible devices
Frequency band	2.4 GHz/5 GHz
Data transfer rate	Up to 867 Mbit/s
Security	Open Authentication Shared Authentication EAP-SIM EAP-AKA EAP-TLS EAP-TTLS/MSCHAPv2 PEAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC WPA Personal and WPA2 Personal WPA Enterprise and WPA2 Enterprise
Encryption	WEP 64 bit, WEP 128 bit, TKIP and CCMP (AES)
Power save	WMM-UAPSD
QoS	WMM, WMM Power Save

DLNA Certified™ (Digital Living Network Alliance)

Supported Device Classes	***M-DMS – Mobile Digital Media Server*** Media Types: image, video and music Summary: The digital media server exposes the media files in you device to a Wi-Fi® network. The files can then be access from other DLNA Certified clients or Sony devices which support home networks. ***M-DMP – Mobile Digital Media Player*** Media Types: image, video and music Summary: Play content stored on another device, for example, a server or a PC, directly on your device. ***M-DMC – Mobile Digital Media Controller*** Media Types: image, video and music Summary: A remote controller that searches for content on another device and plays them on your device. ***+PU+*** Media Types: image and music Summary: Play media in your device on another device, such as a TV or a PC using 2 box push technology. +PU+ is integrated in the Album and Music applications. ***+DN+*** Media Types: image, video and music Summary: Download content stored on another device, for example, a server or a PC, and play the downloaded content directly on your device. ***+UDO+*** Media Types: image, video and music Summary: The digital media server also has the capability to get uploaded files from other DLNA Certified™ clients.
Supported Bearers	Wi-Fi® Wi-Fi Direct™
DRM Support	The DLNA Certified™ implementation does not support DRM-protected content.

Messaging

MMS (Multimedia Messaging Service)

According to OMA Multimedia Messaging Service v1.0 + SMIL

Email

Bearer type (IP)	GPRS, EGPRS, UMTS, LTE, Wi-Fi®
Character sets	BIG5 Traditional Chinese GB18030 ISO-2022-JP Japanese ISO-8859-1 ISO-8859-2 Eastern Europe ISO-8859-5 Cyrillic ISO-8859-7 Greek ISO-8859-9 Turkish ISO 8859-11 KOI8-R Cyrillic Shift_JIS Japanese US-ASCII UTF-16 UTF-8 Windows® 874 Windows® 1251 Cyrillic Windows® 1252 Windows® 1254 Turkish Windows® 1258 Vietnamese
Protocols	POP3 and IMAP4
Push email	Microsoft® Exchange ActiveSync® (EAS) IMAP4 IDLE (RFC2177)
Secure email	SSL/TLS, both port methods (POPS/IMAPS) and STARTTLS
HTML mail	Yes (read only)

More information:

www.sonymobile.com/developer

www.openmobilealliance.org

Positioning – location based services

Supported standards:

- OMA Secure User Plane Location (SUPL) v1.0 and v2.0
- 3GPP™ Control Plane location (incl. Emergency location)
- Qualcomm® GPSOneXtra™

Supported satellite systems:

- GPS
- GLONASS
- BeiDou*

NOTE1: When needed, the device automatically uses a combination of all available satellite system to accurately provide location information

** BeiDou satellites are not used for providing location information in U.S. territory.*

Provisioning (OMA CP)

OMA CP version 1.1

Multimedia (audio, image and video)

Audio Playback	**Decoder format**	**Supported in file format**
	AAC (AAC-LC, AAC+, eAAC+, AAC-ELD)	3GPP (.3gp, 3gpp), MP4 (.mp4, .m4a), ADTS (.aac)
	ALAC	MP4 (.m4a)
	AMR-NB, AMR-WB	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4a), AMR (.amr, .awb)
	DSD	DSF (.dsf), DSDIFF (.dff)
	FLAC	FLAC (.flac), Matroska (.mka)
	MIDI	SMF (.mid), XMF (.xmf), Mobile XMF (.mxmf), OTA (.ota), RTTTL (.rtttl), RTX (.rtx), iMelody (imy)
	MP3	MP3 (.mp3)
	PCM	WAV (.wav), AIFF (.aiff)
	Opus	Opus (.opus), Matroska (.mkv)
	Vorbis	OGG (.ogg), Matroska (.mkv)
	WMA	ASF (.wma)
Audio Recording	**Encoder format**	**Supported in file format**
	AAC (AAC-LC, AAC+, AAC-ELD)	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4a)
	AMR (AMR-NB, AMR-WB)	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4a), AMR (.amr)
Image Playback	**Decoder format**	**Supported in file format**
	BMP	BMP (.bmp)
	GIF	GIF (.gif)
	JPEG	JPEG (.jpg, .jpeg)
	PNG	PNG (.png)
	WebP	WebP (.webp)
Image Capture	**Encoder format**	**Supported in file format**
	JPEG	JPEG (.jpg)

Video Playback	**Decoder format**	**Supported in file format**
	MPEG-4	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4v), Matroska (.mkv), AVI (.avi), Xvid (.xvid)
	H.263	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4v)
	H.264	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4v), Matroska (.mkv)
	H.265	3GPP (.3gp, .3gpp), MP4 (.mp4, .m4v)
	Xvid	AVI (.avi), Xvid (.xvid), Matroska (.mkv)
	VP8	WebM (.webm), Matroska (.mkv)
	VP9	WebM (.webm)
Video Recording	**Encoder format**	**Supported in file format**
	MPEG-4	MP4 (.mp4)
	H.263	3GPP (.3gp), MP4 (.mp4)
	H.264	MP4 (.mp4)
	H.265	MP4 (.mp4)
	VP8	WebM (.webm)
Audio/Video Streaming	Streaming transport	HLS HTTP progressive streaming RTSP
DRM	DRM (Digital Rights Management) – features the rights and copy protection of downloaded content	OMA OMA DRM v1.0 Marlin DRM Widevine Level 1 PlayReady DRM (available in specific regions)

Synchronisation (OMA DS, EAS, Google Sync™)

OMA Data Synchronisation protocol versions 1.1.2 and 1.2

OMA Data Formats: vCard 2.1, vCalendar 1.0

Microsoft® Exchange ActiveSync® protocol version 2.5

Microsoft® Exchange ActiveSync® protocol version 12

Microsoft® Exchange ActiveSync® protocol version 12.1

Microsoft® Exchange ActiveSync® protocol version 14

Microsoft® Exchange ActiveSync® protocol version 14.1

Google Sync™

Related information:

www.sonymobile.com/developer

Web browser

Google Chrome™ for Android™ is pre-installed in markets/regions where no restrictions apply.

Related information:

https://play.google.com/store/apps/details?id=com.android.chrome

Memory in Android™ devices

To use Android devices efficiently, users should be aware of the different types of device memory. This knowledge is important in order to understand, for example, where data such as music, photos and videos is saved; how many apps can be downloaded from Google Play™; and how photos can be copied to a PC.

Information regarding memory presented in this section may be useful to developers when optimising applications for mobile devices.

Generally, all Android devices share the same basic memory setup. What differs is how much memory is available to you via the different types of memory, and whether your device uses an external SD card or an internal memory chip. Any information specific to the particular device model described in this White Paper is noted as such.

Types of memory

The types of memory described and numbered below are consistent with the terminology used in Sony mobile device menus and in other content relating to 2015 Xperia™ devices:

1. **Dynamic Memory** (also known as RAM) is used by applications that run when the device is turned on. The amount of Dynamic Memory influences how many applications and operating system services can run at the same time. The Android operating system automatically closes applications and services that are not being used.

   However, such automatic functionality has limits. For example, if a lower amount of free RAM is available to applications after a new release of the operating system (due to increased capabilities in the system), device speed will eventually be impacted. This is the main reason that a device cannot be indefinitely upgraded to newer releases of Android™.

   If you experience problems with RAM, for example, if the device runs slower than usual or if the Home application restarts frequently when you leave an application, you should minimise the use of apps that run all the time. Social networking apps that connect and update their data online and animated backgrounds are examples of apps that are always running and affect RAM performance. To minimise RAM issues, you could also consider using a static wallpaper instead of a live wallpaper.

   To see which apps and services are currently active, go to **Settings > Memory**. You should have at least 50 MB, and ideally 100 MB or more, of free RAM to avoid slowdowns and application restarts.

   You should also be aware that if you update the device to a later Android release, the load on the built-in Dynamic Memory will increase due to the addition of more features. As a result, the device may run slower after an update.

   The Xperia™ X Performance has 3 GB of RAM available to the Android OS and any installed applications. 200 MB of the total RAM is in use during normal operation when the user starts using the device out of the box.

2. **System Memory** (also known as “System partition” or “/system”) is used for the Android OS and for most applications that are pre-loaded from the factory. This type of memory is normally locked, and can only be changed through a firmware upgrade. There is usually some free space available in this section of memory. However, since it is locked, you cannot save apps, photos or any other content to this memory. System Memory is reserved for future firmware upgrades, which almost always need more memory than the original firmware. You cannot see or influence the use of this memory.

3. **Internal Storage is referred to as "working" memory.** It can be compared to the C: drive on a PC or to the startup disk on a Mac.

   This type of memory is used to store all application downloaded from the Google Play™ Store (and other sources) as well as their settings and data (such as emails, messages and calendar events, for example). All applications have an allocated area for application data. Memory dedicated to an application is inaccessible to other applications.

   Some game applications also store content such as game music and game level information outside their own designated area. In most cases, an application can choose to save its data in a location of its own choosing (outside the protected application settings area). Generally, such content is not deleted when an application is uninstalled; it must be removed manually by connecting the device to a computer with a USB cable, or by using a file manager application.

   Internal storage is also used for all added user content. For example, photos taken using the device's camera, media files downloaded from the Internet and file transfers are stored in this area. Typical user content includes:
   - photos
   - movies
   - music
   - Email attachments

   Internal Storage will tend to fill up as a result of normal usage. Devices with a large initial Internal Storage can handle more applications and store more user content.

   If the Internal Storage starts to get full, the device slows down, and in some cases it might no longer be possible to install more apps. You should always ensure that you have at least 100 MB of free Internal Storage. If not, you should consider removing some apps that you seldom use, or move content that you do not frequently access to external storage.

   You can see approximately how much Internal Storage is free in **Settings** > **Storage & USB**. You can also view more details about how much memory is used by applications under **Settings** > **Apps**. In the Xperia™ X Performance, about 20 GB of Internal Storage is available out of the box.

   Please note that in Sony Mobile 2015 products, “Internal Storage” is now the combination of what was previously known as “Device Memory” or “Phone Memory” (for applications and their data – also previously known as “/data”) and “Internal Storage” (for user’s content – also previously known as “/sdcard”). The changes in Internal Storage were made so that memory usage could be more flexible and to allow encryption of user content.

Memory card slot

Some products include both a large internal memory and a built-in memory card reader. Android manages devices with a built-in memory card reader and internal memory differently from a device that includes only a built-in memory card reader.

Since most applications expect only a single location for storage, such applications will not generally allow you to SAVE anything to the memory card (i.e., they do not offer the option to choose a storage location). However, some applications (for instance, the Sony Mobile “Camera” application) may actually allow you to do so. Other applications, for example, backup applications such as the Sony Mobile “Memory” application, will by definition be configured to copy content from the Internal Storage to the external SD card.

On the other hand, when it comes to reading from an external SD Card, you will be able to access content (for example, videos, photos and music) on a memory card inserted in this slot without any special consideration since the Android system searches all available memory for content. Therefore, such products may be regarded as supporting a fourth type of memory, called “External Card” or “SD Card”.

4. **SD Card** (known as “/ext_card” from a programmer’s point of view, or by other names in other Android products) is the name for the removable SD memory card in all 2015 Sony Mobile products. As described in the previous section, this External Card memory is generally more limited in that any application can read from it, but many applications cannot save to this card. Only a few applications, including backup applications and file manger applications, have the capability to save to this card.

Backing up data to different memory types
Generally, you should not save photos, videos and other personal content solely on the internal memory of a device. If something should happen with the hardware, or if the device is lost or stolen, the data stored on the device’s internal memory is gone forever.

In a device where an SD card reader is the main memory, it is relatively easy to take the card out and copy all content to a PC or Mac, or to an entertainment device with a memory card slot. In a product featuring Internal Storage as the main memory, it is not possible to physically remove the memory. Instead, any critical or high-value content must either be copied to an external SD card by a special backup application, transferred to remote storage over a network (mobile or Wi-Fi), or to a computer via a USB cable.

To facilitate the transfer of data via a cable, the Xperia™ X Performance supports Media Transfer Protocol (MTP), which makes it possible to easily transfer content back and forth between your device and a Windows® PC or an Apple™ Mac® computer. This application is called Xperia™ Companion and it can be downloaded from the Xperia™ X Performance support page.

Note that you do not need to back up or make a copy of applications that you have downloaded from the Google Play™ Store. They can normally be downloaded again after you have set up your Google account to work in a new device (or in a device where the memory has been completely erased).

Note 1:
Some Android devices, including Sony Mobile devices from 2012 and Sony Ericsson devices from 2011 and earlier, do not use a single “Internal Storage” for both applications (and their data) and user content. Instead, these devices use either an external SD card for user content, or a corresponding area of internal memory to reproduce the functionality of an SD card. In such devices, there is a fixed limit between the application area (“/data”) and the user content area (“/sdcard”), with the result that user content can build up and reach this limit. When the user content reaches this limit, no additional data can be added using any application. For example, the camera application would no longer be able to capture additional photos even if a considerable amount of free space was available in the application area. This limit also applies to the application area. Downloading and installing new applications would not be possible even if there was enough free memory in the user content area.

Note 2:
Some devices with integrated storage have abandoned the distinction between the application area and the content area when it comes to a Factory Data Reset. As a result, there is no option in such devices to perform a Factory Data Reset and preserve content. In such devices, all content is completely deleted from the device when a reset is performed.

In contrast, Sony Mobile’s memory integration solution makes it possible to preserve user content in this situation. Therefore, when performing a Factory Data Reset, the default action will still be to only remove applications and their data, and an option box must be checked if all content is to be removed as well (as might be desirable when selling the device second-hand).

Note 3:
For a developer, it is important to note that from a programming point of view the location names used to refer to the different memory areas described in Note 1 are still valid, i.e., the area used for applications (“/data”) is still present, as is the area used for content (“/sdcard”).

In reality, “sdcard” is a “symbolic link” to “/data/media”. However, from inside an Android application, “/sdcard” can still be used. For example, you can use “sdcard/DCIM/100Android” to find all camera images. The continued use of “/sdcard” to access the content area ensures compatibility across different products and Android releases in this regard.

Trademarks and acknowledgements

Visit *www.sonymobile.com* for more information.