Terminology

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The definitions on this page will be shown as hovertext wherever the terms appear throughout the rest of Devices Wiki, courtesy of the Lingo MediaWiki extension (https://www.mediawiki.org/wiki/Extension:Lingo).

Yes! Please do add items and edit existing items. If you look for something here and do not find it, please add it once you find your answer. Adding and editing terms must be done in **Edit source mode and instructions are below.**

For terms and acronyms applicable to Microsoft generally, checkout http://aka.ms/acrobot or http://aka.ms/msglossary

For terms and acronyms applicable to Windows, checkout https://osgwiki.com/wiki/Glossary or https://osgwiki.com/wiki/General_OS_Acronyms

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

# #

1074
    Microsoft Pty Ltd Australia LRD
1082
    Microsoft New Zealand Limited LRD
1290
    Microsoft Operations Pte Limited
1291
    Microsoft Regional Sales Corporation
1337
    aka " Leet ", is a system of intentional (mis)spellings, and non-sense prefixes and suffixes that originated in Bulletin Board Systems and IRC Chat-Rooms in the 1980s, but are now used primarily on the Internet. It often uses character substitutions, 'accidental' mispellings, and partial obfuscation to represent an otherwise mundane word.
1DSC
    1 Devices Supply Chain
1ES
    One Engineering System
1PDM
    One Product Data Management
1PP
    First Party Product (Microsoft Product)
2FA
    Two-factor Authentication (https://en.wikipedia.org/wiki/Multi-factor_authentication) - an authentication process that requires an additional piece of information in addition to username and password. See also MFA.
3D
    Three Dimensional
3d LUT
    3D Look up Table - This is a color enhancement look up table, that makes certain colors more vivid (such as Sky, greens) while preserving skin tones. This is optional feature that can be can be enabled in our TCONs. Wikipedia link. Also see Display Basics
3G
    Third Generation
3GPP
    3G Partnership Project
3PP
    Third Party Product
8+2 dithered
    This is a technique to display 10 bit content on a 8 bit Panel without losing too much detail. See Display Basics
θ
    Zenith angle in the spherical coordinate system
Φ
    Azimuth angle in the spherical coordinate system
Ω
    Solid angle defined at the phase center of the DUT

A

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A2DP
    Advanced Audio Distribution Profile - a Bluetooth profile that defines how multimedia audio can be streamed from (for example) a laptop to a speaker over a Bluetooth connection.
A2N
    Approval to negotiate - an internal term about basically locking all of the assumptions for the program for the PMO team to then go negotiate with the end customer.

A-SKU

Finished good SKU - perfect for Sale in Retail or Commercial

AAD

Azure Active Directory

ABAP

Advanced Business Application Programming

ABC

Abnormal Boot Count - Also see ABS or RCADe.

ABC indicator

an Indicator that classifies a material as an A, B, or C part according to its consumption value. This classification process is known as the ABC analysis.

ABM

See VariBright

ABSD

ABS

Abnormal Shutdown - See also LPBH. https://www.deviceswiki.com/wiki/Abnormal_shutdown

ABL

Assessment of Battery Life. ABL replaces LVP as Surface battery life measure.

Accenture Planning Team

Accenture vendor team locates in Manila Philippines that execute the requests to create or update planning data in SAP system (ECC, APO and IBP). The requests are primarily from demand planners, supply strategists and planners using the templates in the SharePoint [1] (https://microsoft.sharepoint.com/teams/MasterDataSetupDevicesSupplyChain/Shared%20Documents/Forms/AllItem s.aspx?RootFolder=%2Fteams%2FMasterDataSetupDevicesSupplyChain%2FShared%20Documents%2FTemplates&FolderCTID=0x01 2000FF14B06CFA3FD54EB2437A35EFC5AC4F)

AC

Adaptive color. See Display Basics

ACE

Abnormal Compatibility Experience

ACF

Anisotropic Conductive Film - Bond a Flex to another Flex or to a board.

ACL

Asynchronous Connections Link

ACM

Authenticated Code Module (https://en.wikipedia.org/wiki/Trusted_Execution_Technology#Chain_of_trust) - in the context of Secure Boot and/or TXT, an ACM is a signed, known valid module of code. It is responsible for authenticating early UEFI boot via Intel BootGuard. The ACM itself is signed by an Intel key, burned into the CPU silicon, and it is the first thing that executes on the system when booting.

ACM

Auto Color Management - a windows OS feature.

ACP

Adjacent Channel Power
Attorney-Client Privileged

ACPI

Advanced Configuration and Power Interface (https://en.wikipedia.org/wiki/Advanced_Configuration_and_Power_Interface) - as in UEFI/BIOS device enumeration - devices are mapped to ACPI device nodes - replaces BIOS and Plug-and-Play implementations on PC - a way to describe all the static resources in the system so the OS can enumerate and manage them.

ACS

Ambient Color Sensor - can be used to determine how best to display color graphics (e.g. if the ambient environment does not offer much blue light, perhaps the display should use more or less blue light depending on the desired effect). See also ALS, SurfaceColorSensor, Display Basics

ACT

Automated Consumer Test - Xbox Box Build tester that tests the I/O of the unit: SPDIF, test, HDMI-In test, Power LED light test, Console button, test, IR receive test, IR blaster test, HDMI 4K video test, USB test, Chipcorder test, Controller binding test, RF power test, DP video test.

Adaptive Sync

Adaptive Sync is a feature where the Panel and the Graphics component can dynamically change the refresh rate to save on Power.

ADC

Analog-to-Digital Converter - an electronic component that can convert an analog signal into a binary number (e.g. the analog value that a strain gauge or ambient light sensor produces is converted by the ADC so that the value can be processed by firmware) - see also DAC

Azure Data Catalog - a fully managed cloud service that enables users to discover the data sources they need, and to understand the data sources they find, while helping organizations get more value from their existing investments

ADF

Azure Data Factory - a cloud-based data integration service that allows you to create data-driven workflows in the cloud for orchestrating and automating data movement and data transformation

ADI

Analog Devices (Inc.) (http://www.analog.com/) - makers of, among other things, the ADUX1050.

ADK

(Windows) Assessment and Deployment Kit (https://docs.microsoft.com/en-us/windows-hardware/get-started/adk-install) - An OEM (for example) can use the Windows ADK to customize Windows images for large-scale deployment.

ADL

Alder Lake (https://en.wikichip.org/wiki/intel/microarchitectures/alder_lake) - Intel's SoC following Tiger Lake

ADLA

Azure Data Lake Analytics - is an on-demand analytics job service to simplify big data analytics

ADLS

Azure Data Lake Store - is an enterprise-wide hyper-scale repository for big data analytic workloads. Azure Data Lake enables you to capture data of any size, type, and ingestion speed in one single place for operational and exploratory analytics

ADO

Azure DevOps (https://azure.microsoft.com/en-us/services/devops/?nav=min) - The cloud-based source code control and issue-tracking system formerly known as VSTS, VSO and TFS. Formerly known as Visual Studio Team Services, Azure DevOps is the tools & platform used in the planning, development, and deployment of Microsoft products and services.

ADS

Advanced Design System

ADW

Azure Data Warehouse - is a massively parallel processing MPP cloud-based, scale-out, relational database capable of processing massive volumes of data

AFH

Automatic Frequency Hopping

AFP

Anti-Fingerprint (coating) - a special coating applied to stainless steel to prevent fingerprints from appearing.

AGM

AMD Graphics Manager. https://www.deviceswiki.com/wiki/AMD_power_tools#AMD_Graphics_Manager_.28AGM.29

AGWF
AgWf

Agile Waterfall is the work tracking, planning and reporting methodology used by the Devices SW team.

AHCI

Advanced Host Configuration Interface AHCI - OSDev Wiki (https://wiki.osdev.org/AHCI)

AI

Artificial Intelligence

AID

Automation Infrastructure and Data team

AIF

Application Interface Framework

AIF

Age In Field - How long a device has been in the field

Allocations

Allocations are a method of limiting stock available to orders. Additional check in the confirmation calculation BOP and ATP.

ALP

Account Level Planning

ALS

Ambient Light Sensor - See also ACS

ALTM

Ambient light Tone Mapping - Delos equivalent of LACE

AM

Account Manager

AMA

Ask Me Anything - In the context of Devices SW/FW, an AMA is a specific "meeting" where anyone can come ask questions of (for example) Scott Fudally or whoever is hosting the "Ask Me Anything."

AMI

American Megatrends (Inc.?) (https://ami.com/products/bios-uefi-firmware/) - is a BIOS/UEFI software vendor.

AML

ACPI Machine Language (http://wiki.osdev.org/AML) - byte code that defines devices and objects - AML interpreter can build database of devices. See also ASL

Approved Manufacturer List - used in creation of part numbers in OnePDM

AMT

Intel Active Management Technology - is a low-power mgmt standard independent of host OS. This is a component you can add to the Management Engine to allow remote access of the machine, outside of OS control, even when the device is powered off.

ANC

Active Noise Cancellation - a feature of Surface Earbuds and/or Surface Headphones that relies on the speaker generating an "opposite" sound wave to actively cancel out ambient noise, allowing the user to focus on music or ignore a noisy environment

AOC

America's Operating Channel

AOI

Area of Interest - an idea or concept or opportunity that warrants deeper exploration and scoping

Automated Optical Inspection - an automated visual inspection of a Printed Circuit Board (PCB) or LCD or transistor manufacture where a camera autonomously scans the device under test (DUT) for both catastrophic failure (e.g. missing component) and quality defects (e.g. fillet size or shape or component skew). It is commonly used in the manufacturing process because it is a non-contact test method. It is implemented at many stages through the manufacturing process including bare board inspection, solder paste inspection (SPI), pre-reflow and post-reflow as well as other stages. See also AXI

APC

Advanced Prototyping Center on this Wiki

APE

Abnormal Performance Experience

APD

Angular Power Distribution

API

Application Programming Interface

APIC

Advanced Programmable Interrupt Controller (https://wiki.osdev.org/APIC) - "is used for sophisticated interrupt redirection, and for sending interrupts between processors.", also a component in ISH block diagram in Tushar's Tech Talk 20171110

APO
Advanced Planner and Optimizer (SAP Environment)
Audio Processing Object

APOC
Asia Pacific Operating Channel

AppX
Apps and experiences team: SurfaceApp (https://www.microsoft.com/en-us/p/surface/9wzdncrfjb8p?activetab=pivot:overviewtab), SurfaceAudio Android (https://play.google.com/store/apps/details?id=com.microsoft.surfaceaudio&hl=en_US&gl=US) , SurfaceAudio Windows (https://www.microsoft.com/en-us/p/surface-audio/9NXJNFWNVM8D?activetab=pivot:overviewtab), SEMM (https://docs.microsoft.com/en-us/surface/surface-enterprise-management-mode), SDT (https://docs.microsoft.com/en-us/surface/surface-diagnostic-toolkit-business), etc.

AQL
Acceptable Quality Limit

AQR
August Quarterly Release (SAP)

AR Planning
Attached Rate Planning

ARB
Architecture Review Board

ARFCN
Absolute Radio Frequency Channel Number

ARM
ARM chip architecture
Automated Repair Manual

ASAR
Adaptive Spatial Audio Renderer

ASFU
Adaptive Sync Frame Update. Older definition Asynchronous Single Frame Update.
A power saving feature used in tandem with Adapative Sync and PSR to increase the refresh rate so that a single new frame can be updated more quickly without fully leaving PSR. Keeps the system in PSR residency longer.

ASG
Applied Sciences Group on this wiki

ASL
ACPI Source Language - source code compiled into AML; "ASL AML is byte code which is then embedded in UEFI."

ASN
Advanced Shipment Notification

ASP
Approved Service Provider

ASR
Architecture and Specification Review - Agreement on Architecture and Comprehensive Product Specs. http://ie2e

ATF
Audio Testing Framework - See also Chris Borowski's SWFW CoL Tech Talks on this wiki from 20190118

ATO
Assemble To Order (Fulfilment / Operating Model) - at Microsoft, used interchangeably with BTO
Available to Order

ATP
Available to Promise
Acceptance Test Plan

ATS
Available to Sell - Allocation is replaced with Reservation process that works on the key principle - 'Reserve only when and where needed' that speeds up inventory flow and revenue recognition.

Avacado
Hardware : TCON + Toothpick
It refers to a specific Display Hardware that has a TCON chip and Toothpick integrated into it.
Also see Satsuma. Satsuma and Avacado are similar, they use a different TCON chip.

AWB
Air Way Bill - tracking number

AXI
Automated X-Ray Inspection on this wiki

B

B-SKU
Refurbished SKU sold only in after-market.

B2B
Business to Business

BAT
Business Architecture Team - decides the "what" for hardware.

BAPI
Business Application Programming Interface (SAP)

Bathtub curve

The Bathtub curve is a form of the hazard function widely used in reliability engineering to describe the failure rate over the lifetime of a component.

BB

Box Build - as opposed to a dev kit, a box build is "form factor compliant" (it looks like the final, shipping product)

(MTE) Assembly of the components into the product within the product's casing / "box" / container. As opposed to "PCBA Build" which is assembly of the circuitry onto a printed circuit board

BCD

Boot Configuration Data - Is a file that stores information about the boot options on your computer, and BCDEdit is the primary tool for editing the boot configuration data.

BCL

Battery Current Limit

BCR

Business Case Review - http://ie2e

Business Concept Review

BCTB

Boot Configuration Table Bits

BD

Bluetooth Device (address)

Surface Book base, as in RZ/BD in $/Shared/SW/Drivers/SurfaceDTX/Doc/SoftwareDesign.docx

BDM

Beats Development Model - "Beats is the word we use for a product refresh" - as in Tuesday SWFW Review emails. See also CM JDM ODM XDM

(MTE) Zohreh-invented terminology. Learning the beat of the development evolution.

BDS

Boot Device Selection - The fourth phase of booting in a UEFI system - where UEFI decides which device to boot from, and invokes the Windows bootloader.

BER

Bit Error Ratio

BERT

Boot Error Record Table (https://www.osgwiki.com/wiki/ACPI_Platform_Error_Interfaces#BERT)

BFE

Base Filtering Engine (https://docs.microsoft.com/en-us/windows/win32/fwp/about-windows-filtering-platform) - a Windows internal component related to firewall protection; this is important to Devices in the context of DeviceBridge support for manufacturing validation because functionality may be "blocked" by a firewall component so we need to configure BFE to permit access

BFR

Boosted Frame Rate, older term for Dynamic Refresh Rate, see DRR

BGA

Ball Grid Array (https://en.wikipedia.org/wiki/Ball_grid_array) - is a type of surface-mount packaging (a chip carrier) used for integrated circuits.

BIA

Business Impact assessment - performed when a quality issue happens and need to lock stock for Quality inspection

BI

Business intelligence

Correct Black Image

BIH

Bits In Hand - http://ie2e

BIST

Built In Self Test

BKC

Best Known Configuration, an Intel term

Blade

Optional keyboard/mouse-trackpad that can attach to a SurfacePro

You can totally get one with a Seahawks logo on it!!!

BLM

Battery Limit Mode - in the context of power-and-thermal and SAM FW - A mode that limits the maximum battery charge at 50% of its designed capacity. see also BPM, CTT

BLT

Book and Laptop - The Surface product portfolio includes many devices including some in the BLT product line.

BLU

Back Light Unit - our Touch-Display Module (TDM) has a Back Light Unit (BLU) that ensures graphics display properly in all lighting conditions

BMR

Bare Metal Recovery - a USB key with a bootable image on it that allows the device to boot from it rather than an internal harddrive, and installs the image. BMR is created by an end-user with RecoveryDrive.exe, and nly works on their specific device.

BMS

Battery Management System - the integrated circuits, firmware and software that manage charging and discharging the batteries in Surface products.

BOM

Bill Of Materials (https://en.wikipedia.org/wiki/Bill_of_materials) - is a list of the sub-assemblies (e.g. motherboard PCBA, TDM, keyboard and trackpad), parts (CPU, memory modules, SAM microcontroller), and/or software components (SSH driver, UEFI) needed to manufacture an end product.

Bonepile

Term used in the factory to describe units that were built, but need to be re done at some level.

BoE

Basis of Estimate - something you are using as an anchor to figure out estimates for some change or something new.

BOP

Business Opportunity Proposal - a significant project milestone/exec approval stage. (from MSW glossary) An element of the E2E Hardware Development Framework that is a formal review of the product definition, business case, and development and launch plans of the project.

(MTE) Decision to invest in a full development & delivery of a product

BOP Job

Back Order Processing Job

BPM

Business Process Management

Battery Protection Mode (or Module) - in the context of power-and-thermal and SAM FW - A mode that limits the maximum battery charge at 80% of its designed capacity. - see also CTT, BLM

Boot Policy Manifest (UEFI) - A blob signed by the Boot Policy Certificate on the autosign server or with a local development certificate, and stored in the UEFI binary every time you create a build. The Intel CPU checks this signature with BootGuard and prevents booting if the firmware has been tampered or is not correctly signed.

BPMN

Business Process Model and Notation

BPMS

Business Process Management Systems

BPO

Business Process Outsource (Accenture)

BPS

Bits Per Second

BPSC

Business Process And Supply Chain group - formerly Supply Chain Engineering (SCE)

BQE

Bluetooth Qualifications Expert

BR

Basic Rate

BRF

Business Rules Framework

BRD

Business Readiness Document

BRM

Business Rule Management

BS

Basic Station

BSP

Board Support Package - is a software/fw/driver package that Partners release for consumption.

BSS

Business Support Services (Accenture)

BT

BlueTooth

BTA

Build To Availability (Fulfilment / Operating Model) that effects inventory levels based on actual consumption, and is less influenced by small variations in forecast

BTC

Bottom Terminated Component

BTO

Build to Order - a production approach where products are not built until a confirmed order for products is received. Thus, the end consumer determines the time and number of produced products.

BTS

Back To School - the period in which students and their parents purchase school supplies and apparel for the upcoming school year. Compare to "Holiday" which is at the end of the calendar year when many gift-giving holidays exist in many geo's around the world.

Build To Stock - a build-ahead production approach in which production plans may be based upon sales forecasts and/or historical demand.

(Not to be confused with BTS)

BTX

Build to Forecast (Fulfilment Model)

BU

Business Unit

bucket

The back of a tablet - The "bucket" is the shell of a Surface tablet. Some sensors and other components are adhered to the bucket using a PSA.

BVT

Build Verification Testing

BW

Bandwidth

C

C&C

Credit & Collections

CAAD

CaAD

Cosmetic And Assembly Defect

CABAC

Content Adaptive Brightness and Contrast. https://www.deviceswiki.com/wiki/CABC

CABC

Content Adaptive Backlight Control.
https://www.deviceswiki.com/wiki/CABC

CAC (Reader)

Common Access Card (and a reader to let a user authenticate with the CAC) - CAC is a smart card about the size of a credit card. It is the standard identification for Active Duty United States Defense (military) personnel, US Department of Defense (DoD) civilian employees, and others. If a product has a CAC reader, it can be considered for large purchase orders from DoD and other commercial customers more info on Wikipedia

CAPA

Corrective Action / Preventative Action

CARE

See CREW

CAS

Column Address Strobe in a DRAM

CASO

Cross Adaptive Scan Out - It is a Graphics concept that reduces the number of memory copy actions from two to one in case of hybrid GPU configuration. Also see Display Basics

CAT

Customer Acceptance Test

cBMR

Modern (Cloud) Bare Metal Recovery (https://microsoft.sharepoint.com/:p:/r/teams/specstore/_layouts/15/Doc.aspx?sourcedoc=%7B 3A805B56-6601-42DA-B01B-1268188831BB%7D&file=cBMR_oem_deck.pptx)

CC

Colour Calibration - tester or station that verifies that a product's screen colours are properly calibrated and displaying correctly (e.g. that the colour wavelength detected at a point on the screen is the one intended on the display)

CCA

Closed Chassis Adapter

CCB

Change Control Board - the group of stakeholders that must approve any change to manufacturing processes - see also Manufacturing Change Control & Configuration Introduction

CCC

A color calibration library used by device bridge during calibration and also by SurfaceOemPanel driver

CCT

Correlated Color Temperature (https://en.wikipedia.org/wiki/Color_temperature#Correlated_color_temperature) - (CCT, T_{cp}), is the temperature of the Planckian radiator whose perceived color most closely resembles that of a given stimulus at the same brightness and under specified viewing conditions.

CDM

Co-Development Model

CDS

Consumer and Devices Sales group

CET

Control-flow Enforcement Technology (https://www.osgwiki.com/wiki/Control-flow_Enforcement_Technology). Additional References: catc17-introduction-intel-cet-844137 (https://www.intel.com/content/dam/develop/external/us/en/documents/catc17-introduction-i ntel-cet-844137.pdf), CET Technical Overview (https://microsoft.sharepoint.com/:p:/r/teams/WindowsKernel/_layouts/15/Doc.aspx?s ourcedoc=%7BA2890DA7-8B20-449A-AE72-4F0783BC8CAA%7D&file=CET%20Technical%20Overview.pptx&action=edit&mobilered irect=true&DefaultItemOpen=1&share=IQGnDYmiIIuaRK5yTweDvIyqAVQQmOnpo9V4ZnrLbEEimWU&cid=425e4c8e-e1e8-4f17-b10 6-69e2857ae8ee)

C/F

Color Filter - part inside LCD panel

CFU

Component Firmware Update (CFU) - The process to update (and the Windows driver that does the actual update) firmware on a peripheral (e.g. a SAM microcontroller inside a Surface Pro or firmware running in a keyboard made by the PC Accessories team.)

CHAP

Cambria, Haven, Avila, Paloma - Products launched in Fall 2019

CHID

Computer Hardware ID (https://docs.microsoft.com/en-us/windows-hardware/drivers/bringup/target-a-system-using-chid) - Our PLE team may be able to "CHID protect" our devices against unwanted driver updates. PLE can ensure driver updates (https://docs.m icrosoft.com/en-us/windows-hardware/drivers/dashboard/publish-a-driver-to-windows-update) we push out only land on Surface devices.

ChipCorder

(trademark of Nuvoton) A complete, single chip solution for voice, audio recording and playback. It is designed to offer the highest quality single-chip voice record/playback solutions for embedded applications. Non-volatile and highly integrated, they are ideal solutions for adding voice prompts, audio/sound feedback for touch buttons, alerts, interactive menus, and voice memos to consumer, industrial and security products. Available pre-recording services make it easy to add audio/voice to system design. The easily programmable devices also allow array of products to carry branding messages, enabling manufacturers to distinguish their products with high-quality digital playback of audio-grade sound alerts and corporate audio-logo clips. "Acoustic branding" has been embraced by a wide range of markets to build brand identity and distinctiveness, tapping into users' powerful sense of sound

and memory. From Nuvoton ISD ChipCorder Family (http://www.nuvoton.com/hq/products/isd-voice-ics/isd-chipcorder-family/?__locale=en)

CI

Continuous Integration - the software development practice of merging developer working copies into a shared mainline from which an "official" server build is produced.

CI/CD

Wikipedia:CI/CD - Continuous Integration & Continuous Deployment - CI/CD refers to automation in building, testing and deployment of software and firmware.

CIE

Commision Internationale de l'Eclairage (International Commission on Illumination). The CIE (https://cie.co.at/) is the international authority on light, illumination, color, and color spaces.

CIM

Centralized Inventory Management

Common Information Model (https://en.wikipedia.org/wiki/Common_Information_Model_(computing)) - Windows has some CIM information available (for example) from PowerShell. See also WMI

CIP

Continuous Improvement Project - Term used for projects that have transferred to Mass Production MP from NPI

CIS

Cortana Intelligence Suite - a platform and a process to perform advanced analytics from start to finish

CITR

Confidentiality Information Transmittal Reminder

CKM1

Chicony

CL

Coverlay

Clam Shell

Type of PCBA Tester - in which the PCBA DUT is enclosed in a "box" tester with a closing lid ("clam shell") and the testing pins are connected to MTPs by this closing lid action

CLF

Copyright Levy Fee

CLI

Command Line Interface

CLT

Customer Lead Time

CM

Contract Manufacturer - Type of Manufacturing / Development Model or Manufacturing / Development partner relationship. See also BDM JDM ODM XDM

CMC

Chassis Mount Connector.

CMF

color, material, finish - in the context of Surface Manufacturing

CMF

(Intel Term) Customer Must Fix

CMRR

Common-mode Rejection Ratio

CMS

Change Management Service
Content Management Service

CMYK

Cyan Meganta Yellow & Key
https://en.wikipedia.org/wiki/CMYK_color_model

CN/DN

Credit / Debit Note

CN

Core Network

CNC

Computer Numerical Control (https://en.wikipedia.org/wiki/Numerical_control) - is the automated control of machining tools (drills, boring tools, lathes) by means of a computer. Our industrial designs elements like the magnesium cases used on Surface Pro are frequently machined by CNC systems at the factory.

CnD

Could-not-Detect

CNM

Control and Monitor - CnM is a protocol of messages used by touchpad and other subsystems to communicate with other microcontrollers (e.g. SAM or KIP <-> G7), test tools (e.g. ToolboxOne), etc.

CNY

Chinese New Year (https://en.wikipedia.org/wiki/Chinese_New_Year) - a Lunar New Year aka Spring Festival in mainland China, the factory in Shenzen will have downtime to accommodate the holiday

Code complete

means that all known features have their coding finished from an architectural point of view. Features may not function properly, but they are there. More at Code complete

CoB

Chip on Board

COCCOS

Cayucos, Orpheus, Carina, Centaurus, Olympus, Sparti

COD
Cayucos, Orpheus, Daedalus
Codec
Coder Decoder
CoG
Chip on Glass
COGP
Cost Of Goods Purchased
COGS
Cost of Goods Sold
COI
Customer Owned Inventory
CoL
Culture of Learning - a formal initiative/program to foster communities of learning but also the aspect of our organizational culture related to "learning it all" rather than "knowing it all"
Community of Learning - any of the many communities organized around a discipline like Mechanical Engineering or SW and FW that a person can join and participate in - see Culture of Learning for more info
Color Pipeline
Color Pipeline refers to the component that does color correction on Surface devices. It may be a TCON or Graphics card or both.
COM
Channel Operations Manager
CoP
Community of Practice
COS
Conditions of Satisfaction
Continuity of Supply
COSA
Country and Operator Settings Asset (https://docs.microsoft.com/en-us/windows-hardware/drivers/mobilebroadband/cosa-overview) - the format of config files that Mobile Operators (MOs) use to provision Windows devices for mobile broadband.
Cosmetic Yield
Yield as related solely to output of cosmetic test stations, including criteria such as steps, gaps, color, dents, scratches, etc. See Manufacturing Yield
COSMIC
Case Management System
COT
Combined Optical Tester - replaces / replaced by Discrete Colour Calibration, Optical and ICE test stations.
CPFR
Collaborative Planning, Forecast and Replenishment
CPICH RSCP
Common Pilot Channel Received Signal Code Power
CPIK
CPK
Process Capability Index measure - See also CPK on this wiki
CPLD
Complex Programmable Logic Device
CPMT
Confidential Project Management Tool. A tool to request access to a project tent. http://aka.ms/CPMT
CPS
Configurable Process Scheduling - tables are SAP transactions where the MLT, CLT and launch SKUs information is maintained.
CPX
ComPact eXperience - Scott-ism. Has to do with small systems that need a SAM-Lite
CRAD
Customer Requested Arrival Date
CRB
Change Review Board. May also see Change Management Board used for the same thing, but for now noone uses CMB.
CRC
Cyclic Redundancy Check
CRD
Customer Reference Design. It is QC's internal device that they use for testing.
CREW
Customer Repair Experience & Warranty. see more here (https://deviceswiki.com/wiki/CREW)
CRITs
Critical bugs, usually in reference to ship stopping bugs.
CRM
Customer Relationship Management
CRSD
Customer Requested Ship Date
CRSL
Certification Requirements Status List
CRU
Commercial or Consumer Replaceable Unit
CS
Connected Standby (https://en.wikipedia.org/wiki/InstantGo) - See also MS (Modern Standby), D0, S3/Standby.
CSI

Camera Serial Interface [2] (https://en.wikipedia.org/wiki/Camera_Serial_Interface) video tutorial[3] (https://www.youtube.com/watch?v=kad9wOKEQc8), CSI-2 [4] (https://www.mipi.org/specifications/csi-2), video tutorial[5] (https://www.youtube.com/watch?v=8REu_h7bzHM)

CSD
> Customer Special Deal

CSME
> Converged Security and Management Engine - is another name for the Intel Management Engine (ME), as it now also handles platform security (eg Bootguard, HDCP, etc)

CSP
> Complementary Software Partners
> Chip Scale Package

CSR
> Customer Service Representative

CSS
> Customer Service and Support (https://microsoft.sharepoint.com/teams/CSS)

CST
> Customer Scenario Testing
> China Standard Time (Time Zone Abbreviation) - UTC+08:00 (eight hours ahead of Coordinated Universal Time), note specifically that this is not Central Standard Time (a North American timezone which is UTC-6)

CTA
> China Type Approval (CTA) is the regulatory certification for all cellular capable devices to sell in China, including phone, tablet and laptop, and it's also preconditioned to get operators' approval to sell devices through operator channels. Windows cellular PCs shipment to China will be blocked without reaching CTA compliance. It's also known as Network Access License (NAL).

CT
> Cycle Time

CTB
> Clear to Build

CTLE
> Continuous Time Linear Equalization

CTF
> Critical to Function

CTO
> Configure To Order

CTP
> Common Test Platform (https://microsoft.sharepoint.com/teams/MTEHub/CTP/) - MTE's HW+SW manufacturing test solution comprised of a two-tester universal hardware strategy and a common software platform.
> Critical to Process

CTQ
> test plan - "Critical To Quality" - as in "Please review the RF SW DVE CTQ for Jupiter Wi-Fi SAR."

CTR
> Critical To Reliability

CTS
> Clear To Send - in the context of hardware flow control, CTS is an indication from endpoint A to endpoint B that endpoint B can send data - it is "clear to send"; see also RTS, UART
> Critical to Safety

CTT
> Cut The Top - Battery protection feature. Incremental cuts to max charge voltage of the battery, based on the HVT stress metric. see also BPM, HVT

CTx
> Critical to x (x is a placeholder) - A requirement or scenario that is critical to x where x is a specific area or attribute in the development or manufacturing or usage of the product - for example CTQ = Critical to Quality.

CVB
> Conversion Board

CVC
> Characteristics Value Combination

CVE
> Common Vulnerabilities and Exposures - a CVE number identifies a specific security issue - patches or fixes for a CVE can be applied to a software installation to prevent the vulnerability from being exploited

CXE
> Customer eXperience and Engineering on this wiki
> An umbrella "test, validation and compliance" organization that includes DASH, EMC verification engineers and DVSE engineers among others. See Ali Akgun (http://who/is/aakgun)

CXT
> Customer eXperience Testing - On Demand customer focused testing on Surface Devices in Suzhou. Run by the Quality Fundamentals Team. Testing can include (not limited to), weekly LKG tests, RTP and FCU validations and focused bug repros

D

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D0
> state of being in full power See also CS

DAC

Digital-to-Analog Converter - an electronic component that can convert a binary number into an analog electrical signal (e.g. digital values representing music are converted into analog electrical signals so that a speaker can produce sound we can hear) - see also ADC

DAE

Device Analysis & Engineering

DAQ

Data Acquisition

DAS

Devices Android Software -a team in addition to the actual software - builds software that runs on the Surface Duo product line

DASH

Devices Analytics for Software and Hardware - a team in the Devices org that is focused on data-science related to telemetry

dB

Decibel

DB

Device Bridge

A Devices solution to control a DUT (device under test) on factory. Acts as a bridge between 2 systems - one is the controller and another is the DUT / Client.

dBm

dB referenced to one millwatt

DBC2

Debug class USB 2.0

DBC3

Debug Class USB 3.0

DBX

Secure Boot Forbidden Signature Database (UEFI) - table of signatures for UEFI binaries that should no longer be trusted/loaded. docs.microsoft link (https://docs.microsoft.com/en-us/windows-hardware/design/device-experiences/oem-secure-boot); UEFI spec link (https://uefi.org/revocationlistfile)

DC

Distribution Center (formerly known as DTV)

Data Center (like Azure Data Center)

DCH

DCHU

Dedicated Channel

D = Declarative, C = Componentized, H = Hardware Support Apps, U = Universal APIs - In reference to Universal Drivers (see also the DCH_(DCHU) wikipage)

DCI

1. Direct-Connect Interface - ITP over USB3.0 port, to allow XDP debugging access on box build units. Must be enabled in UEFI.

2. a common RGB color space. See DCI-P3

DCI-P3

DCI/P3

DCI-P3 or DCI/P3 (https://en.wikipedia.org/wiki/DCI-P3) is a common RGB color space.

DCP

Devices Controlled Projects

DCR

Design Change Request

DCT

Display Calibration Tool (dct.exe). A tool for display factory calibraton.

DCU

D = Declarative, C = Componentized, H = Hardware Support Apps, U = Universal APIs - In reference to Universal Drivers

DDI

Device Driver Interface (https://msdn.microsoft.com/en-us/windows/hardware/drivers/ieee/device-driver-interface--ddi--changes-in-windows-7) - is an interface (method) on an object/driver.

DDIC

It is component that as same function as TCON, some products such as Neo use DDIC instead of TCON. Purpose is the same.

DDL

Delivery Due List - Auto Delivery Order Creation

DE

Data Entry Team

DEC

(*.dec) Component Declaration File (UEFI) - An INI-formatted file that declares a component/platform. Also see DSC.

DEG

Desktop Experience Group - mice, keyboard, PC Gaming

DES

Devices Engineering Services - is a team in the Devices org that maintains our Azure DevOps infrastructure.

Display Enhancement Service (https://osgwiki.com/wiki/Display_Enhancement_Service_OEM_Settings) - DES is a Windows component that controls screen/display brightness and color. Surface drivers interact with the DES.

DESMO

Desmo - is a file server for project related materials \\desmo\. Access is managed at the project level through https://alltent

DETS

Devices Engineering Tools and Services (https://deviceswiki.com/wiki/Devices_Engineering_Tools_%26_Services_(DETS)) - the team in Devices that (among many other things) makes sure our Azure DevOps is running smoothly!

DEV

Deviation Manufacturing - refers to an approved deviation on the manufacturing line coordinated through OnePDM

Dev Kit

Development unit built from device PCBA. Mounted in a frame with other device components such as Display and battery - Used as primary development platform for Dev and DVE in initial EV device stages. Provides full access to debug connectors and test points which are not available in a Box Build device

Device Portal

Surface Device Portal Plugin Deployment - a tool to get information about a device. See also WDP

DEW

Dielectric Withstanding Voltage Test (aka HiPot or High Potential) - a dielectric withstand test or "high potential" or "hipot" test is an electrical test performed on a component or product to determine the effectiveness of its insulation. The test may be between mutually insulated sections of a part or energized parts and electrical ground. The test is a means to qualify a device's ability to operate safely during rated electrical conditions. Bing search result (https://www.bing.com/search?q=dielectric+withstanding+voltage&form=EDGEAR&qs=PF&cvid=bb0ef0d81b0e4abf8355adae6c1ef373&cc=US&setlang=en-US)

DEX

Driver Execution Environment. This stage consist of C modules and a dependency-aware dispatcher. With main memory now available, CPU, chipset, mainboard and peripherals are initialized in DXE and BDS.

Df

Dissipation Factor (PCB Laminate Dielectric Property)

DFA

DfA

Design for Assembly - Consideration in the design of the product for how the product will be put together so that the assembly can be done more easily and effectiently and cost effectively and result in a higher quality product at less cost.

DFCI

Device Firmware Configuration Interface (https://docs.microsoft.com/en-us/mem/autopilot/dfci-management) (UEFI) - A standardized set of settings providers with a Settings Manager that UEFI components can access to get configuration information. Devices enrolled through Intune can have their DFCI settings remotely managed. see also SEMM and Creating_a_SEMM_DFCI_Settings_Provider

DFE

Decision Feedback Equalization

DfM

Design for Manufacturability - Consideration in the design of the product for how the product will be manufactured so that the manufacturing can be done more easily and effectiently and cost effectively and result in a higher quality product at less cost.

DFMMEA

Design Failure Modes, Mechanisms & Effects Analysis

DFPS

Dynamic Frames Per Second - Similar to DRRS but used for full screen D3D gaming.

DFR

Design for Reliability, Design for Repair

DFS

Design for Safety

Design for Surface - industry partners create accessories for Surface devices in coordination with the CXP team. http://aka.ms/dfs

DFT

DfT

Design for Test - Consideration in the design of the product for how the product will be tested for assembly and manufacturing defects so that the testing can be done more easily and effectiently and cost effectively and result in a higher quality product at less cost.

Discrete Fourier Transform

DFU

Device Firmware Update (https://www.intel.com/content/dam/support/us/en/documents/emerging-technologies/intel-realsense-technology/Windows-RealSense-D400-DFU-Guide.pdf) (Intel tool) - The DFU tool is used to update (perhaps among other firmware) Intel® RealSense™ D400 series camera firmware.

DFX

Design for Excellence - is a team within the Microsoft Devices Organization

DfX

Design for X (where X = fill in the blank) - Consideration in the design of the product, for how the product will be assembled and manufactured and tested so that the assembly/manufacturability/test can be done more easily and efficiently and cost effectively and result in a higher quality product at less cost.

DHoP

Distinct device Hits over Population. Number of unique devices that hits a particular issue over a population is 10000. DHoP uses permyriad (‰₀), which is 1/10000 or 0.01%. E.g. DHoP 6 ‰₀ indicates that 6 out of 10000 devices exhibit a certain issue.

dGPU

Discrete GPU - a removable graphics processing in the base of a Surface Books to facilitate the super gamer scenarios. When the display is detached, a handoff occurs to the onboard Intel GPU.

DIBS

Desktop Imaging Build System - An automation system used to create customized Windows desktop images for Surface devices. It is been replaced by Glissade. See: Imaging Builds category (https://deviceswiki.com/wiki/Category:Imaging_Builds)

DIO

Digital Input/output

DISM

Deployment Image Servicing and Management (https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/dism---deployment-image-servicing-and-management-technical-reference-for-windows) - a command-line tool that is used to mount and service Windows images before deployment. You can use DISM to install, uninstall, configure, and update Windows features, packages, drivers, and international settings in a .wim file or VHD using the DISM servicing commands.

Display Calibration

The process of calibrating displays of our devices, so that we can render the best image to the user.

Dk

Dielectric Constant (PCB Laminate Dielectric Property)

DK

Dev Kit

DL

Downlink

DLC

Download Center. A Microsoft web-site where software may be downloaded by a user (including MSI packages).

DM

Dimensional Management (https://microsoft.sharepoint.com/teams/DimensionalManagements)

DMA

Direct Memory Access (https://en.wikipedia.org/wiki/Direct_memory_access) - a method of transferring data between the CPU and a peripheral; Direct Memory Access (DMA) operations do not involve the CPU in each item in the data transfer. In DMA, the perihperal has *direct access* to a buffer in memory and the memory management unit will interrupt/signal the CPU when the buffer is full. In contrast, PIO (Programmed I/O) does involve the CPU in each transaction.

DMIC
D-MIC

Digital Microphone - a microphone that converts analog sound into a digital signal that can then be processed by software (e.g. Teams/Skype or recording software)

DMS

Document Management System

DeviceMFT
DMFT

Device Media Foundation Transform

DNX

Download and eXecute (DnX) I a feature that allows any user to download a CSME FW binary from an external host connected using USB to Intel PCH based device. Can use it for getting logs, download UEFI when system is bricked

DO

Delivery Order

DOE

Design Of Experiments - Usually a unit with holes or other augmentations that make it easier to test

Dolby

Dolby Laboratories, Inc. is an American company specializing in audio and video. Wikipedia link

DP

Display Port. It is port on the PC to connect external monitors. Wikipedia (https://en.wikipedia.org/wiki/DisplayPort).

DPC

Deferred Procedure Call (https://en.wikipedia.org/wiki/Deferred_Procedure_Call) - See also IRQL; an ISR shouldn't block or use much CPU time so a DPC is scheduled to handle longer-running tasks
Devices Program Central - http://dpc.microsoft.com

DPCCH

Physical Control Channel

DPCD

Specific register in EDID that controls some settings such as configuraiton of link between Soc and display.

DPCH

Dedicated Physical Channel

DPDCH

Dedicated Physical Data Channel

DPMO

(Intel Term) Defect Per Million
Defect Per Million Opportunities

DPO

Devices Portfolio & Operations on this wiki

DPP

Device Provisioning Partition - one part of the UEFI (or bootchain) image that is stored in Non-volatile RAM on the device see also TechTalk from 20220225

DPPM

Defective Parts per Million

DPR

Dynamic Power Reduction

DPST

Display Power Saving Technology. Intel's platform terminology for Content Adaptive Brightness and Contrast (CABC)

DPTF

Dynamic Platform and Thermal Framework (https://software.intel.com/en-us/articles/2-in-1-tablet-mode-game-performance-with-intel-dynamic-platform-and-thermal-framework-intel) - See also WTMF; DPTF is an Intel® (proprietary) platform-level hardware/software solution for power and thermal management.

DQ

Devices Quality

DRM

Digital Rights Management - methods used to encrypt digital video or other media

DRI

Directly-Responsible Individual - See also PoC, a DRI is the named individual who is responsible for a feature, bug or other work

DRIPS

Deepest Runtime Idle Platform State (https://docs.microsoft.com/en-us/windows-hardware/design/device-experiences/modern-standby) - See also MS (Modern Standby) "*The DRIPS state corresponds to the lowest power state for the SoC during Connected Standby or Modern Standby. This is also referred to as S0 low power idle.*"

DRIVE

Devices Research & Inclusive Vision (DRIVE) User Research Team

DRoB

Daily Rhythm of Business

DRR

Dynamic refresh rate - A windows OS feature that dynamically changes the refresh rate on Windows Desktop in situations such as inking. This is official term for BFR aka Boosted Frame Rate

DRRS

Dynamic Refresh Rate Switching - Dynamic Refresh Rate Switching is a power-saving feature that allows switching between low and high refresh rates for full screen video playback.

DRT (AOC)

Delivery Request Template

DRTM

Dynamic Root of Trust (DRTM) Measurement - aka Secure Launch (https://docs.microsoft.com/en-us/windows/security/threat-protection/windows-defender-system-guard/how-hardware-based-root-of-trust-helps-protect-windows) - see also this (https://www.microsoft.com/security/blog/2020/09/01/force-firmware-code-to-be-measured-and-attested-by-secure-launch-on-windows-10/) blogpost

DRTU

Diagnostics and Regulatory Testing Unit - is a tool used for Box Build (BB Radio Frequency (RF) Testing.

DS

Direct Ship

Shipping directly from CM to customer.

DS4A

Direct Ship for All

DSC

(*.dsc) Descriptor File (UEFI) - The main build file for a platform (What to build). Also see DEC & FDF.

DSC

Display Stream Compression - Compression for Display port. VESA's Display Stream Compression (DSC) standard (https://www.anandtech.com/show/7958/vesa-and-mipi-announce-display-stream-compression-standard)

DS-CR

DS-CR is a Design data, change and configuration management software package, Formerly known as DS-2

DSE

Devices Software Engineering

DSI

Display Serial Interface. MIPI aliance standard for the display interface, a packet protocol definition on top of the MIPI Physical Layer (PHY), supporting MIPI D-PHY and C-PHY in the latest version

DSM

Device Setup Manager (https://osgwiki.com/wiki/Device_Setup_Manager_Tracing) - related to device drivers and related WPP tracing.
Device Specific Method (https://docs.microsoft.com/en-us/windows-hardware/drivers/bringup/acpi-device-specific-methods) - a function (method) defined in ACPI that can be called by a driver, for example, to initialize hardware or perform some other function.

DSDT

Differentiated System Description Table - The primary device ACPI table (DSDT.ASL)

DSPE

Device Services and Product Engineering - Also DS&PE. Organization within MDO (Microsoft Devices Operations) under Tim MCGuiggan that delivers customer service, repair, warranty, and factory improvements among many other things. Includes CREW Operations, Engineering, and Experience teams; Design for Service (DSR), and Product Engineering (PE). See individual team pages for further details.

DSQO

The Devices Software and Quality Organization (DSQO, pronounced "disco") is led by Ali Akgun and includes Post-Launch Engineering (PLE) in addition to Design Verification Engineers and SW/FW Engineers. Learn more at http://aka.ms/dsqo

DST (Team)

Direct to Store (Direct Shipment)

DSX (Team)

Devices Software Experiences- DSX creates tools and services that enable Digital Transformation to empower everyone across the Devices organization.

DTCH

Dedicated Traffic Channel

DTD

Display Timing Descriptor. One of the panel property entries in Intel Video BIOS Table

DTP

Desktop Procedures

dTPM

Discrete TPM - Physical TPM Chip (See also PTT).

DTS

Data Transfer Service - Used to securely share files with external files. How to share large data files with Qualcomm on this wiki

DTV

Distribution Turnkey Vendor (warehouse)
a type of device image that can be used by a repair site (see also Repair-and-Refurbish and CREW) to re-image a device; because the repair site won't have the same provisioning infra that the manufacturing line has, a DTV image has additional UEFI capsules and scripts to apply provisioning PLE_Where_are_the_builds#DTV_Images

DTX

Detach eXperience - When you press the detach button on the base of a Surface Book, a little green flyover appears to tell you the display is detached and can be safely removed.

DUA

Driver Update Acceptable (https://social.msdn.microsoft.com/Forums/windowsdesktop/en-US/d5ae8deb-5066-4882-9861-8b9c2ff0 974d/hck-submission-using-the-driver-update-acceptable-dua-process?forum=whck)
as in "DUA Certification" on http://surface/SW%20Wiki (http://surface/SW%20Wiki)

DUN

Dial Up Networking

DUT

Device(s) Under Test - a term used to refer to a manufactured product undergoing testing, either at first manufacture or later during its life cycle as part of ongoing functional testing and calibration checks. This can include a test after repair to establish that it is performing in accordance with the original product specification.

DV

Design Verification (http://conceptspring.com/hardware-product-development-process/) - a milestone/step in the hardware development process. See also EV, Software Milestone Definitions and this blog post on Conceptspring.com (http://conceptspring.com/hardware-product-development-process/)

DVE

Design Verification Engineering - a team that does testing to ensure various hardware and firmware components are behaving correctly.

DVEF

DVE Factory

DVR

Design Verification Review

DVSE

Design Verification and Systems Engineering - a specific DVE team that does platform testing to ensure various hardware and firmware components are behaving correctly.

DVT

Design Verification Test

DXE

Driver eXecution Environment - a UEFI term for the third phase of booting where EFI drivers are loaded

DXG
DXGI

DirectX Graphics Infrastructure

https://en.wikipedia.org/wiki/DirectX_Graphics_Infrastructure

DirectX Graphics Infrastructure (**DXGI**) is a user-mode component of Windows Vista and above which provides a mapping between particular graphics APIs such as Direct3D 10.0 and above (known in DXGI parlance as producers) and the graphics kernel, which in turn interfaces with the user-mode Windows Display Driver Model driver. DXGI provides objects to handle tasks such as enumerating graphics adapters and monitors, enumerating display modes, choosing buffer formats, sharing resources between processes (such as between applications and the Desktop Window Manager), and presenting rendered frames to a window or monitor for display

E

e2e

Program's end-to-end lifecycle - The Microsoft e2e framework provides a framework for the development and delivery of Microsoft's hardware products. The e2e framework takes a program from the earliest conceptual stages through development, sustaining, and retirement through a set of structured milestones, gates, and processes.

E-SKU
Exchange SKU

SKU Sent as an exchange when customers return product for repair. Not sold in retail (A-SKU) or after-market (B-SKU).

E-Stop

Emergency Stop

EAP

Extensible Authentication Protocol
Early Adopter Program

EC

Embedded Controller - A legacy component used to control the system (power, thermals, charging, etc). Connects over the LPC bus. Superseeded by SAM on newer Surface devices (Laptop / Pro 2017 and beyond).

ECC

Enterprise Core Component
Elliptic Curve Cryptography - see also TechTalk from 20180803

ECCM

Error-Correcting Code Memory

ECDSA

Elliptic Curve Digital Signature Algorithm - see also TechTalk from 20180803

ECN

Engineering Change Notices

ECO

Engineering Change Order - are documents that must be filed whenever a change is needed on the factory production line. These documents and changes are coordinated through the OnePDM tool.

ECR

Engineering Change Request - refers to a change request for factory production line. ECRs are coordinated through the OnePDM tool. ECRs require approval from the MCRB to be implemented.

EDID

Extended Display Identification Data (https://en.wikipedia.org/wiki/Extended_Display_Identification_Data) - is a data structure provided by a digital display to describe its capabilities to a video source (e.g. graphics card or set-top box). It is what enables a modern PC to know what kinds of monitors are connected to it. EDID is defined by a standard published by the Video Electronics Standards Association (VESA).
This is an ID of the Display. This is how Display advertizes its capabilities to the OS

eDP

Embedded DisplayPort (https://en.wikipedia.org/wiki/DisplayPort#eDP) - defines a standardized display panel interface for internal connections[6] (https://www.embedded.com/edp-a-better-embedded-display-ecosystem); e.g., graphics cards to notebook display.
It is connected to the primary display of the device.

EDR

Extended Dynamic Range. Also refer to Display Basics

eSE

embedded Secure Element - See tamper-proof chip to secure data on Gemalto.com (https://www.gemalto.com/iot/consumer-electronics/embedded-secure-element)

eSPI

Enhanced Serial Peripheral Interface Bus - See an Intel bus specification; Palsamy gave a tech talk Fri 21Apr2017 on eSPI. (https://microsoft.sharepoint.com/teams/wwc-devices-sw-fw/Shared%20Documents/DevTalks/eSPI-bus4_21_2017)

EC

Embedded Controller - is a legacy microcontroller responsible for controlling power/thermals/buttons/etc. Communicates over LPC bus. Found in Pro4/Book1/etc. Replaced by SAM from Laptop/Pro5 onwards.

ECO/ECN

Engineering Change Order/Notification

ECT

Extended Customer Test. Perform a test, similar to smoke test, to test all function for the device. Test to find the issue the customer reported, perform failure analysis for the failures, then root cause and drive the solution.

EDD

Estimated Delivery Date

EDI

Electronic Data Interchange

EDL

Emergency Download (Qualcomm processor mode)

EDR

Enhanced Data Rate

EDS

Energy Dispersive Spectroscopy

EE

Electrical Engineering on this wiki

EEAP

Ecosystem Engagement Access Program - (from MSW glossary) A Microsoft program in which pre-RTM weekly operating system releases are made available to NDA partners.

EFI

Extensible Firmware Interface. See also UEFI

EHS

Environment, Health and Safety

EIRP

Effective Isotropic Radiated Power

EIS

Effective Isotropic Sensitivity
Executive Information System

eGPU

External GPU

EKPub

Endorsement Key Public

ELT

Extended Leadership Team

EM

Emerging Markets

EMC

Electro-Magnetic Compatibility (https://en.wikipedia.org/wiki/Electromagnetic_compatibility) - (compliance) testing related to (unintended/undesirable/uncompliant) emission of and susceptibility to electromagnetic radiation
Epoxy Molding Compound

EMEA

Europe, Middle East and Africa

EMI

Electromagnetic Interference
Energy Meter Interface - a Windows OS API that is used to get/report energy consumption see also Energy Meter Interface (https://docs.microsoft.com/en-us/windows-hardware/drivers/powermeter/energy-meter-interface) on docs.microsoft

eMMC

Embedded MultiMediaCard - is a small storage device made up of NAND flash memory and a simple storage controller

EMV

Engineering and Marketing Validation - See https://ie2e/

EOC

    European Operations Center

EOL

    End of Life

EOS

    EOS is a first generation surface dock product without the foundation to mount the Surface device on compatible with Surface Pro 3, Pro 4 and Book. First Gen Surface Dock on Teams (https://surface/teams/ple/_layouts/OneNote.aspx?id=%2Fteams%2Fple%2FPLE%2 FDev%2FPLE-SW-DEV&wd=target%28EOS.one%7CC6D2311A-9080-4230-8AB3-BE6E7850F81F%2FWU%5C%2FDLC%20Release%20 Step%205%3A%20Integrate%20MSFT%20Signed%20DP%5C%2FMCU%7CBC20DD4E-FD29-42FD-BF1A-29C226EBCD31%2F%29)

EP

    Enterprise Portal
    Epsilon Operating System - the customized build of Android that runs on [Surface Duo (https://www.microsoft.com/en-us/surface/d evices/surface-duo)]
    End Point
    Entry Point in UEFI

EPP

    Employee Purchase Program

ERP

    Enterprise Resource Planning

eSCO

    Extended Synchronous Connection Oriented Link

ESD

    Electronic Software Delivery
    Electrostatic Discharge

ESDP

    Enhanced Service Discovery Profile

ESIM

    Embedded Subscriber Identity Module

ESR

    Environment Safety (and Regulations?) - Hasnain (http://who/is/hsyed)'s team in Ali Akgun's org is (as of March 2019) responsible for ensuring our devices don't radiate too much electromagnetic radiation. You might hear the term ESR in a context like: "ESR is blocking selfhost." (if a device hasn't been shown to be safe for distribution outside of EE and SW engineers who presumably understand the risks of potentially higher electromagnetic radiation.)

ESR

    EMC SI RF

ESRT

    EFI System Resource Table - is a table provided by UEFI that defines what firmware components a system has that can be upgraded via Capsule. Shows up in the Device Manager under 'Firmware'

ESS

    1. Employee Self Service
    2. Enhanced Sign On Security

ETLA

    Extended Three Letter Acronym
    JFYI

ETSI

    European Telecommunications Standards Institute

ETW

    Event Tracing for Windows - provides a mechanism to trace and log events that are raised by user-mode applications and kernel-mode drivers

EUD

    Embedded USB Debug

EUT

    Equipment Under Test. See also DUT

EV

    Engineering Verification (http://conceptspring.com/hardware-product-development-process/) - a milestone/step in the hardware development process. See also DV, Software Milestone Definitions and this blog post (http://conceptspring.com/hardware-product-d evelopment-process/) on Conceptspring.com

EVM

    Error Vector Magnitude - a measurement used to quantify the performance of a digital radio transmitter or receiver.

    EVO

    Overview of Intel® Evo™ Platform in Intel® Laptops (https://www.intel.com/content/www/us/en/support/articles/000057480/proces sors/intel-core-processors.html)

EWDK

    Enterprise Windows Development Kit

EWP

    Early Warning Program - a coordinated, cross-functional effort led by the New Product Introduction organization to rapidly improve product quality at product launch.

External Camera

    Machine Vision Camera (prosilica) used for Display Test

F

F

Carrier Frequency

F&L

Fulfillment & Logistics

FA

Failure Analysis - Application of specific tools and methods to determine the specific cause of a failure, often as part of a 5C investigation. Failure analysis is typically preceded by Fault Isolation (FI). FA labs are managed by DAE teams under Qing Gu (https:// who/is/qigu) and Frank Huang (https://who/is/frhuang).

FAI

First Article Inspection (https://en.wikipedia.org/wiki/First_article_inspection) - a formal method of providing a reported measurement for a given manufacturing process.

FAR

Firmware Architecture Review - review firmware before release / iteration

FASP

Financial Accounting System for Prototyping

FASR

Firmware Attack Surface Reduction - a set of requirements/certifications to ensure UEFI is secure

FAT

Factory Acceptance Test

FAX

Fax Profile

FBVDD

Frame Buffer Voltage regulator power delivery for GPU

FCC

Federal Communications Commission

FCCL

Flexible Copper Clad Laminate

FCID

Foreign Checked-In Binary

FCT

Factory Circuit Test
Functional Circuit Test
Full Component Test - A step/milestone in product development. See also Factory Process Outline on this wiki

FCU

First Customer Update (WU1 changed to First Customer Update)

FDD

Frequency Division Duplex

FDM

Financial Data Management (https://microsoft.sharepoint.com/teams/financialdatamgmt/Pages/Hierarchies.aspx)

FD

Flash Device (UEFI) - represents a physical device where firmware can be stored, eg, a SPI flash chip. Made up of one or more Firmware Volumes (FVs)

FDF

(*.fdf) Flash Descriptor File (UEFI) - Tells the build system how to package UEFI drivers into a binary image. Some post-processing is needed to turn this into a flashable image. See also: DSC.

FDO

Functional Device Object - related to but different from a filter DO - as in MDSN article. "Device nodes and device stacks" on Microsoft.com (https://docs.microsoft.com/en-us/windows-hardware/drivers/gettingstarted/device-nodes-and-device-stacks)

FEXT

Far-end crosstalk. See also NEXT

FFC

Flat Flex Cable

FFS

Firmware File System (UEFI) - a filesystem used by UEFI to store EFI drivers and files and define their dependencies

FFU

Windows Full Flash images. See Capture and apply Windows Full Flash Update (FFU) images (https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/deploy-windows-using-full-flash-update--ffu)

FG

Finished Goods

FI

Fault Isolation - Initial step in analyzing a specific failure mode, with goal of determining the physical location of the failure (e.g. specific component, pin, or mechanical feature). Typically employed in yield improvement and repair workstreams as part of a 5C investigation.

First Input

The count of first test results without excluded error codes

First Success

The count of first passed results (ErrorCode=0x00000000), without repair

FIT

Failures In Time - FIT is the number of failures per 1,000,000,000 (1 billion) device-hours. A component having a failure rate of 1 FIT is equivalent to having an MTBF of 1 billion hours. Most components have failure rates measured in 100's and 1000's of FITs. It is often denoted by the Greek letter λ. From Bing (https://www.bing.com/search?q=failure+in+time+definition&qs=SC&pq=failures+in+time&sk=AS2&sc=8-16&cvid=22ABB9F5DD33415581486DB1EA0166AF&FORM=QBLH&sp=3)

FM

Factory Management - Works on process on the line, determines parameters and assembly flow

FMD

Full Material Declaration

FMP

Firmware Management Protocol - UEFI term - provides a way to enable capsule update for a firmware component in the system (eg. Touch, SAM). Each FMP device appears in the ESRT

FOS

Factory Operating System

FOV

Field of View

FP

Front Panel

FPC

Flexible Printed-board Connector

Flexible Printed Circuit - See also PCB

FPF

Field Programmable Fuse (Intel) - One-time-programmable fuses located in the PCH/CPU, used to store a multitude of things, including SVNs and key hashes. Fuses are blown at the factory and cannot be "un blown".

FPGA

Field-Programmable Gate Array

FPN

Fixed-Pattern Noise

FPP

Full Packaged Products

FPPA

Final Published Plan Allocation

FPR

Fingerprint Reader - aka Fingerprint Sensor (FPS) - found on Surface Laptop Go (https://www.microsoft.com/en-us/p/surface-laptop-go/94FC0BDGQ7WV), for example - you can sign-in using your fingerprint!

FPS

Fingerprint Sensor - aka Fingerprint Reader (FPR) - found on Surface Laptop Go (https://www.microsoft.com/en-us/p/surface-laptop-go/94FC0BDGQ7WV), for example - you can sign-in using your fingerprint!

Frames per Second - a metric that is important for video game experience and video playback (e.g. watching an action movie)

FPT

Flash Programming Tool

used to, for example, update the UEFI on a Surface Pro; see c:\Tools\Intel\FPT\fptw64.exe - See also "Lilypad"

FPY

First Pass Yield - Metric indicating the percentage likelihood of a device device passing through production test line on first attempt or after allowed retests. See Manufacturing Yield and Factory Retest (OLR).

FQIB

Field Quality Inspection Bug

FQR

February Quarterly Release (SAP)

FR

Failure Rate

FRE

First-run Experience - for example, the first time a Surface Pen is used, there is some set-up that needs to be done.

FRU

Field-Replaceable Unit (https://en.wikipedia.org/wiki/Field-replaceable_unit) - printed circuit board, part (e.g. SSD drive), or assembly that can be quickly and easily removed from a computer and replaced by a technician without having to send the entire product to a repair facility.

Front Camera

DUT Camera on Display side, facing user

Frozen Horizon

Frozen Horizon Period - Order Change/Cancellation Request. In case customer request a change on an order (cancellation or modification) in the frozen horizon period, the request needs to be sent to country COM and consequently to Channel Lead for approval. The frozen horizon period is calculated 3 weeks from customer requested delivery date.

FS

Free Space

Factory Support - refer to Surface_DSE_SW/FW_Suzhou_Outsourced_Factory_Support_Team_Roles_and_Responsibilities

FSCM

Financial Supply Chain Management

FSD

Full Screen Display

FSR

Force Sensing Resistor

FSU

Field Service Unlock - FSU mode in MCU FW was designed for third party repair centers to have access to an elevated set of MCU SSH commands in customer mode.

FSU

First Software Update (WU1 changed to First Software Update)

FTA

Full Type Approval

FTDI

Future Technology Devices International (https://en.wikipedia.org/wiki/FTDI) - A Scottish semiconductor company, specializing in Universal Serial Bus (USB) technology.

FTF

Force To Fire - the amount of force in grams (gF) to make a mechanical switch connect. FTF is used for touchpads and keysets and is nominally 150gF for the touchpad and 60gF for the keyset. Also F2F.

fTPM

Firmware Trusted Platform Module. {See also dTPM}

FTY

Fresh Test Yield - Metric indicating the percentage likelihood of a device device passing through production test line on first test attempt alone. See Manufacturing Yield and Factory Retest (OLR).

Functional Yield

Yield as related solely to output of functional test stations, typically to confirm operation of product functionality against parametric limits. See Manufacturing Yield

Fused units

Boots with black screen, cannot be updated to production signed UEFI

FV

Firmware Volume (UEFI) - Contains FFS sections. Can also contain additional Firmware Volumes. Can be compressed or raw. Also see: FFS, FD.

FVI

Final Visual Inspection

G

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G5

Generation 5 - Pen and Touch controller developed by Surface. It is used to detect pen and touch and send the reports to the host

G6

Generation 6 - the new Pen and Touch Controller developer by Surface that replaces G5. It provide better performance than G5 and enables to support challenging TDM stacks

GA

General Availability - The date retail partners can start selling new product(s) to end-customers. GA is specific to Surface and PC Accessories, Xbox refers to this as "Street Date"

Gage R&R

Gage Repeatability & Reproducibility - See also USL LSL MSA

Gamut

In color reproduction, including computer graphics and photography, the **gamut**, or **color gamut** /'gæm?t/, is a certain *complete subset* of colors. The most common usage refers to the subset of colors which can be accurately represented in a given circumstance, such as within a given color space or by a certain output device.

Wiki

Devices Wiki

GAP

Generic Access Profile

GAS

Gyro-Accelerometer Station

GATP

Global Availability to Promise

GBE

Gigabit Ethernet - refers to the Intel Gigabit Ethernet device that we use in some products, eg. Studio.

GBI

Global Business Intelligence - In charge of logistics, allocation of resources

gBMR

Generalized BMR -- the ones Surface Imaging creates, works on any device for which it is meant.

GC

General Contractor - the individual who is primarily responsible for a feature - she coordinates with "sub-contractors" to get the overall project finished (just like in construction)

Governance Council - a cross-functional v-team that controls changes to Azure DevOps - includes members from DES and Devices Software Engineering Windows Team

GD&T

Geometric Dimensioning and Tolerancing - this (https://www.gdandtbasics.com/what-is-gdt/) article provides a great overview of the topic related to tolerances of parts we use in manufacturing.

GDDR

As per Graphics Double Data Rate (memory) (https://www.computerhope.com/jargon/g/gddr.htm), is a type of memory tailored for use with video cards. While it shares design similarities with the DDR SDRAM used as system memory, it is important to note that GDDRhas several distinctions that make its performance much faster.

GDPR

General Data Protection Regulation (https://en.wikipedia.org/wiki/General_Data_Protection_Regulation) - European Union regulation protecting data and invididuals' privacy.

Gerber

Electrical Hardware Spec - The Gerber format is an open ASCII vector format for 2D binary images. It is the de facto standard used by Printed Circuit Board (PCB) industry software to describe the printed circuit board images: copper layers, solder mask, legend, etc. Gerber is used in PCB fabrication data. Source Gerber format on Wikipedia (https://en.wikipedia.org/wiki/Gerber_format)

GG

Gas Gauge - the indication of battery charge remaining

GL

GreenLight - When a manufacturing process moves from bring-up to ready for production

Glissade

Glissade is the new system that creates Windows images for Surface devices - it will replace DIBS.

GM

Gross Margin

GMD

Get More Data - a feature of Windows telemetry that allows additional logging or crash dump info to be collected to help with investigation of an issue - see also [Get More Data (GMD) (https://www.osgwiki.com/wiki/Get_More_Data_(GMD))] on OSGWiki.

GMM

Gaussian Mixture Model (Intel) - A component in the SA that has something to do with speech recognition.

GMS

Google Mobile Services (https://www.android.com/gms/) - This is the certification that gets a device access to the app store. If our Surface Duo is to have access to the Android Play (app) store, we need to validate it meets all these certification criteria.

GOP

Graphics Output Protocol - a UEFI term for what is basically a Graphics Driver. This is often used to refer to the 'Intel GOP Driver' which is updated as part of UEFI. It provides limited runtime services support. The operating system is permitted to directly write to the framebuffer provided by GOP during runtime mode. However, the ability to change video modes is lost after transitioning to runtime services mode until the OS graphics driver is loaded.

Wiki

GPE

General Purpose Event (ACPI) - An ACPI interrupt handler.

GPIO

General Purpose I/O (https://en.wikipedia.org/wiki/General-purpose_input/output) - a pin on a CPU that is tied/soldered to a specific, custom hardware element (e.g. a device OEM may tie a GPIO to a latch sensor so software can programmatically determine if a latch is closed)

GPS

Global Positioning System

Green

When used in reference to a project: No significant issues or risks exist in the project or project scope. Specifically, the plan communicated to Stakeholders is moving forward as planned.

GSA

Germany, Switzerland & Austria

GSM

Global System for Mobile Communications

GT

Graphics (Intel) - The graphics engine component of an Intel SoC (aka. "iGPU"/"iGFX")

GTR

Ground Truth Reality (https://en.wikipedia.org/wiki/Ground_truth) - the actual facts as opposed to a planned outcome. For example, a spreadsheet can be used as a *planning* tool for a Software BOM but the actual image manifest describes what the **ground-truth reality** (i.e. the actual set of drivers in an image) is.

GUI

Graphical User Interface

GUID

Global Unique IDentifier

Gψ(θ,φ,f)

Antenna gain pattern in the ψ-polarization as a function of the spherical coordinates and the carrier frequency

H

HAF

Heat Activated Film

HAR

Hardware Architecture Review

HARA

Hazard Analysis Risk Assessment

HAST

Highly Accelerated Stress Test

HBI

High Business Impact

HBR

High Bit Rate. It is a protocol that defines the bandwidth on Display Port output on USB-C port. SurfaceBook2 was HBR2. Newer Products may be HBR3

HCA

Hinge Clutch Actuator

HCK

Hardware Certification Kit (https://developer.microsoft.com/en-us/windows/hardware/windows-hardware-lab-kit) - See also WLK, HLK, WHCK

HCM

Human Capital Management

HDCP

High Definition Content Protection - a per-device key that may need to be provisioned during manufacturing that permits decoding of for-pay HD content like Netflix - Ilan Berker relayed an anecdote about how 1,000,000 of the codes cost $5,000 and we don't want to run out. It is a form of digital copy protection developed by Intel Corporation to prevent copying of digital audio & video content as it travels across connections. Intel, AMD, and Nvidia preprovision their hardware with keys. Today, Qualcomm does not. External displays, cables, adapters, and other peripherals (e.g. Miracast dongles) need to be provisioned as well. HDCP is not part of integrated panels as they are "in the box" and considered secure.

Note - it is always in the context of protected content out of the device display port, it does not apply to the protected content playing on the primary display panel

See here

HDI

HDInsight - is a cloud distribution of the Hadoop components from the Hortonworks Data Platform (HDP). Apache Hadoop was the original open-source framework for distributed processing and analysis of big data sets on clusters of computers

HDMI

High-Definition Multimedia Interface. It is port on the PC to connect external monitors. Wikipedia (https://en.wikipedia.org/wiki/HDMI)

HDR

High Dynamic range (https://en.wikipedia.org/wiki/High_dynamic_range) is a dynamic range higher than what is considered to be standard dynamic range. The term is often used in discussing display devices, photography, 3D rendering, and sound recording including digital imaging and digital audio production. The term may apply to an analog or digitized signal, or to the means of recording, processing, and reproducing such signals

HECI

Host Embedded Controller Interface (https://en.wikipedia.org/wiki/Host_Embedded_Controller_Interface) - an Intel subsystem API; used to talk to ISH controller and the Management Engine (ME). Intel Precise Touch also uses this interface to communicate with the Touch device.

HEAT

Heat is an infrastructure within touch frameworks (eg. Windows for TDMs or Touchpads). It enables developers to run their own logic within a service and offload the processing, leveraging the host resources. It provides touch information in a array that describes the touch across the whole device. This is used for processing complex use like gestures.

HF

Human Factors

HID

Human Interface Device (https://en.wikipedia.org/wiki/Human_interface_device) (USB protocol) - as in "The driver monitors HID reports from SAM... " ... "...all HID-defined devices deliver self-describing packages that may contain any number of data types and formats. "

HIDI2C

HID over I2C

HIDSPI

HID over SPI

HiPot

High Potential Tester - Also known as DEW - A Dielectric withstand test or "high potential" or "hipot" test is an electrical test performed on a component or product to determine the effectiveness of its insulation. The test may be between mutually insulated sections of a part or energized parts and electrical ground. The test is a means to qualify a device's ability to operate safely during rated electrical conditions.

HLG

Hybrid Log Gamma. A HDR standard

HLK

Hardware Lab (or Logo) Kit (https://developer.microsoft.com/en-us/windows/hardware/windows-hardware-lab-kit) - See also WLK, WHK, HCK.

HMB

Host Memory Buffer - Something in relation to RAM, search for HMB + DRAM on bing

HMI

Human Machine Interface

HOB

Hand-over Block (UEFI) - Data handed off from PEI to DXE

HoBL "hobble"

Hours of Battery Life - a key performance indicator for mobile products. See also ABL.

Host

main CPU (e.g. Intel i7 or AMD chip) - a term that's used in the context of peripheral sensors and/or microprocessors (e.g. Intel Sensor Hub or SAM)

Hovis Method

Power savings and performance enhancements in Xbox One X (Scorpio). Hovis Method on this wiki

HPD

Hot Plug Detect (https://www.datapro.net/techinfo/hot_plug_detection.html#:~:text=Hot%20Plug%20Detect%20or%20%22HPD%22%20is%20a%20feature,the%20connector%20making%20contact%2C%20which%20initiates%20the%20process.) is a feature of the HDMI, DisplayPort, and DVI specifications. Typically, it relies on a single pin in the connector making contact, which initiates the process.

HRC#

Hardware Release Candidate # (e.g. HRC3)

HRR

Half Refresh Rate. Power saving display feature where half of refresh rate is reported to OS, i.e if panel RR is 120Hz, OS RR will be 60Hz in HRR mode.

HSIO

High Speed IO

HSM

Hardware Security Module (https://en.wikipedia.org/wiki/Hardware_security_module) - is a physical computing device that safeguards and manages digital keys for strong authentication and provides cryptoprocessing. These modules traditionally come in the form of a plug-in card or an external device that attaches directly to a computer or network server."

(MTE) Digital vault that hosts the private key for Microsoft

(SoC) Hierarchical State Machine - used to manage the power states of a processor - see also SoC

HSTI

Hardware Security Testability Interface (https://docs.microsoft.com/en-us/windows-hardware/test/hlk/testref/hardware-security-testability-specification) - Reports the results of security-related self-tests and provides assurance validation of proper security configuration.

HUTD / HUT-D

Handling and Usage Test, Dynamic. A reliability handling and usage test loop using dynamic stress conditions, comprised of topple tests and mini drop tests.

HWDRIPS

Hardware Deepest Runtime Idle Power State - SW measurement of HW power use - basically a SLP_S0# counter of how much time SoC was at low pwer state during Modern Connected Standby (MCS)

HVC

High Value Control - Controls that are prominently featured in Microsoft user interface hub frames.

HVCI

Hypervisor-protected Code Integrity (https://docs.microsoft.com/en-us/windows-hardware/drivers/bringup/device-guard-and-credential-guard#:~:text=Hypervisor-Protected%20Code%20Integrity%20can%20use%20hardware%20technology%20and,become%20executable%20is%20through%20a%20Code%20Integrity%20verification.)

HVT

High Voltage Temperature (Time) - in the context of battery, power-and-thermal and SAM FW - this is a metric that indicates how much the battery has been stressed - it's a measure of how long the battery has been spent at a high temperature while being asked to deliver high voltage (4.2 V or higher) - see also BPM, CTT

I

I2C - I²C

Inter-Integrated Circuit - a multi-master serial single-ended bus that is used to attach low-speed peripherals to a motherboard, embedded.

I/Q

In phase / Quadrature phase

IA

Inadvertent Actuation or Inadvertent Action - in the context of trackpad or touchscreen, an **Inadvertent Actuation** is when an actual touch or "ghost" touch is registered by the HW/SW but the user did **not** intend for that to be interpreted as a gesture/interaction/input. User intention doesn't match what device recognized.

Intel Architecture Core - Sometimes used to refer to the individual execution cores in an Intel CPU

IAR

IAR Systems (debugger) (http://www.iar.com/) - as in the context of a discussion of Grasshopper, "IAR could make use of the JTAG header"

IBB

Initial Boot Block (Intel) - A block stored in flash that tells the CPU where to find the entry point for UEFI code.

IBP

Integrated Business Planning

IC

Individual Contributor

Integrated Circuit

ICC

International Color Consortium

ICC Profile

An ICC profile (https://en.wikipedia.org/wiki/ICC_profile) is a set of data that characterizes a color input or output device, or a color space, according to standards promulgated by the International Color Consortium (ICC).

ICCID

Integrated Circuit Card Identifier

ICDM

International Committee for Display Metrology (https://www.sid.org/Standards/ICDM)

ICE

Integrated Communications Experience - webcams/phones

ICEBOX

IR Camera Engine

Inline Cypto Engine

ICL

Icelake - An Intel Processor Microarchitecture

IcM

Incident Management - a web-based tool used to track live-site issues for some Azure services among other things

Internet Communication Manager

ICPS

Intel Connectivity Performance Suite (https://www.intel.com/content/www/us/en/download/738623/intel-connectivity-performance-suite-for-intel-wireless-products.html)

ICT

In-Circuit Test - A type of testing where electrical probes test a populated printed circuit board (PCBA) checking for shorts, opens, resistance, capacitance, and other basic quantities which will show whether the assembly was correctly fabricated.

ID

Industrial Design - The super cool magnesium (for example) housing of some of our products has been mechanically engineered to match designers intent to make our products sleek and appealing.

IDC

India Development Center - refers to Microsoft (Surface) development centers in Bangalore and Hyderabad

IDCRM

In Development Component Risk Management

IDoc

Intermediate Document

IDMS

Information Display Measurements Standard (https://www.sid.org/Standards/ICDM#8271483-idms-download)

IDR

In Design Review - a weekly review with Quality team leadership on program status. Decks are kept at DSQO's Product Day (https://microsoft.sharepoint.com/teams/devices_surface/Quality/ProductDay/IDR%20review?web=1).

IE

Insertion Extraction

Ie2e

Secure Tool designed to manage programs through the e2e lifecycle
Based on the e2e framework developed specifically for Microsoft Devices, ie2e will help track program development activities and progress while providing visibility into reporting and schedule details - from the start of a program until end of life. See also e2e and these additional resources: e2e framework on SharePoint (https://microsoft.sharepoint.com/teams/ProdEEx/e2e/SitePages/e2e.aspx), ie2e Tool Overview (https://ie2e/), e2e Framework Overview (https://ie2e/Content/eLearnTraining/e2e_OV/e2e_Landing_Page.swf), https://ie2e/Content/eLearnTraining/ie2e_Training/training.swf e2e and ie2e Training]

IEC

International Electrotechnical Commission. The IEC (https://www.iec.ch/homepage) is an international standards organization that prepares and publishes international standards for all electrical, electronic and related technologies.

IFWI

Integrated firmware Image

IGD

Intel Graphics Device - Refers to the Intel Integrated Graphics (iGPU)

iGPU

Integrated GPU (Graphical Processing Unit). The main GPU on the Surface Book or other surface devices that is not removable. Also see dGPU.

IHV

Independent Hardware Vendor

IMD

Intermodulation distortion

IMEI

International Mobile Equipment Identity

IML

Ingram Micro Logistics - global third-party logistics (3PL) provider

IMR

In Market Review

IMSI

International Mobile Subscriber Identity

IMU

Inertial Measurement Unit (https://www.analog.com/en/products/sensors-mems/inertial-measurement-units.html) - a sensor based on gyroscope, accelerometer, magnetometer, and/or pressure sensor. Used in applications like SAR conformance (if the device is moving, assume a human is nearby and back-off transmit power.)

Incomplete order

Issue with a price on an order, line is incomplete due to price difference or missing price.

IP

Immediate Pick

IPA

Isopropyl Alcohol - Used for cleaning during repair. Can cause damage to IR link

IPC

Industrial Production Computer - Industrial PCs are primarily used for process control and/or data acquisition in manufacturing. In the context of high-volume manufacturing, an IPC is used as the Host-Controller in a Test Station. As each DUT arrives at the Test Station, the IPC is connected to the DUT and the IPC executes a series of tests to validate that the DUT has been assembled properly (i.e. no manufacturing defects have occurred.)

IPMI

Intelligent Platform Management Interface (Intel) - An interface that allows system administrators to remotely control computers. See AMT.

IPN

Image Profile Number

IPQ

Initial Purchase Quantity

IPS

In-Plane Switching - a type of LCD screen. Compare/contrast to AMOLED.

IPSR

Independent Panel Self Refresh Display

IPT

Intel Precise Touch - Touch Architecture used on Intel chipset. The interface to the touch controller is based on SPI. The IPT protocol define the higher protocol above SPI and the data flow through Intel ME to the HID interface. IPT will not be used in generations that will follow ICL.

IPU

Image Processing Unit - see ISP (same thing)

IQC

Inspection Quality Criteria - The control of raw materials or anything that enters the factory for the manufacturing of goods and products. The opposite, OQC, is Outgoing Quality Control and it is concerned with the finished goods ready for shipment. Suppliers perform an OQC check before shipping raw materials or components to the factory. At the factory, an IQC check is performed (ideally, the same exact check as the OQC at the supplier's facility) to ensure that the materials received from the supplier are good - ie that nothing happened after the OQC in transit that created a quality issue for the good received.

IRM

Information Rights Management - a feature of Outlook email (https://support.microsoft.com/en-us/office/introduction-to-irm-for-e mail-messages-bb643d33-4a3f-4ac7-9770-fd50d95f58dc#:~:text=Information%20Rights%20Management%20%28IRM%29%20allo ws%20you%20to%20specify,read%2C%20printed%2C%20forwarded%2C%20or%20copied%20by%20unauthorized%20people.) that allows a company can protect its confidential information

IRP

I/O Request Packet (https://en.wikipedia.org/wiki/I/O_request_packet) - as in IRP_MJ_DEVICE_CONTROL Shared\SW\Drivers\SurfaceCoSARDriver\sys\Queue.c

IRQ(L)

IRQL

Interrupt Request (Level) (https://en.wikipedia.org/wiki/IRQL_(Windows)) - a fundamental concept in driver writing; the state of the processor/Windows with respect to what type of work it is processing

IRR

Independent Refresh Rate. In Multi mon, this feature enables DWM to compose frames at rate independent of other monitors' RR.

ISH

Intel Sensor Hub - an on-chip feature in some CPU packages that can be responsible for certain sensor management/signal processing...

ISO

The International Organization for Standardization (ISO (https://www.iso.org/home.html)) is an international standard development organization composed of representatives from the national standards organizations of member countries.

ISP

Image Signal Processor - analogous to "digital signal processor", but for pixels (usually from a camera or video file).

ISR

Interrupt Service Routine (https://en.wikipedia.org/wiki/Interrupt_handler) - a function that executes when an interrupt (CPU signal) occurs; See also DPC

ITP

In-Target Probe (Intel) - A JTAG-like debug interface used for debugging the CPU / PCH / etc.

J

JDM

Joint Development Model - One of several development/manufacturing models and partnership models. See also CM BDM ODM XDM

JDM1

codename for a Joint Development Manufacturing partner - they have a factory near Shanghai where many of our products are manufactured

JEDEC

Joint Electronic Device Engineering Council is a standards organization that (among other things) assigns numbers to distinguish types of non-volatile storage parts so a compatible flashing method can be selected. For example, a NOR flash part with a JEDEC_ID of x would require use of SPI whereas a part with JEDEC_ID of y might require use of SWD to program a new firmware image into the part.

JTAG

Joint Test Action Group (Boundary Scan Technology) - an industry standard for verifying designs and testing printed circuit boards after manufacture.

K

KB

Keyboard

kbps

Kilobit per second

KBL

Kabylake - An Intel Processor Microarchitecture

KDS

Kore Device Server - this is a legacy manufacturing system replaced by DeviceBridge

KIP

Keyboard Interface Processor - a microcontroller responsible for scanning key presses from the keyboard and communicating key press events over USP to SAM and eventually to Windows

KM

Key Manifest (Intel BootGuard) - A blob signed by the Key Manifest Certificate, stored in the UEFI image. The private key is stored on a secure server. The KM must be re-generated every 1.5 years when the BPM certificate is updated.

Kona
External partner's name for Microsoft. We refer to the partner as LCM1; they refer to us as Kona to maintain program confidentiality.

Kore
External partner's name for Microsoft. We refer to the partner as JDM1; they refer to us as Kore to maintain program confidentiality.

KPI
Key Performance Indicator (https://en.wikipedia.org/wiki/Key_performance_indicator) - a measurement of a key feature of a device. For example, HoBL is a KPI for mobile computing devices like Surface Pro.

KTLO
Keep The Lights On

Kusto
Kusto (http://aka.ms/csl) is the internal codename for what is known as Azure Data Explorer (https://azure.microsoft.com/services/data-explorer/) externally; it is a big data, log search, text analytics cloud service used for telemetry and other purposes. see also the Kusto page maintained by DASH

KW
Knowledge Warehouse

L

L2CAP
Logical Link Control and Adaptation

LACE
Localized Adaptive Contrast Enhancement (https://www.intel.com/content/dam/support/us/en/documents/graphics/LACE_Graphics_Feature.pdf) is a display post processing technique (by Intel??) which is targeted to provide better user experience under high/bright light conditions such as reading/viewing display contents in sunlight. It works on internal displays and has support on eDP and MIPI. It can co-exist with PSR, VDSC, CoG/MSO and Adaptive Sync. Also see ALTM.

LAN
Local Area Network

LAP
LAN Access Profile

LBR
Last (EV) Build Review

LC
Liquid Crystal Mixture - a part inside LCD panel

LCA
Life Cycle Assessment - a methodology for assessing environmental impacts over the entire life of a product, from "cradle to grave."

LCD
Liquid Crystal Display - is a flat-panel display or other electronically modulated optical device that uses light-modulating properties of liquid crystals.

LCM
Liquid Crystal Module

LCP
Liquid Crystal Polymer

LCU
Latest Cumulative Update - The most recent software update that combines all previous updates for a given product version.

LDI
Liquid Damage Indicator

LDS
Laser Direct Structuring - Laser printing RF circuit for antennas

LEAP
Light Extensible Authentication Protocol

LED
Light-Emitting Diode

Led Driver
This is the backlight controller that drives the current to the Panel. Note: this is **not** a Windows Drivers.

LEE
Laptop Embedded Equipment - For example, an embedded module card embedded in notebooks

LGA
Land Grid Array

LID
Low-power Interactive Display

Lilypad
Lilypad is a GUI tool, developed by Surface engineers, to (for example) observe UEFI and SAM debug output and flash firmware through FTDI based debug cards. see also SurfDbg and SDF (Surface Debug Framework)

LKD
Live Kernel Dump

LKF
Lake Field (https://en.wikichip.org/wiki/intel/microarchitectures/lakefield) - Intel's little brother (previously known as Atom) to Ice Lake.

LKG

Last Known Good - The latest-and-greatest binary image, DLL, exe that should be used for testing. For example, an LKG image for a Surface Pro is an installation of Windows that has Surface-specific UEFI, drivers, etc. included in it. The LKG of a driver is the latest version of that driver that the dev who produces it suggests for testing, selfhost, etc. Product Teams produce an LKG once a week for integration testing, etc.

LL

Lessons Learned

LM

Link Manager

LME

Laptop Mounted Equipment

LNA

Low Noise Amplifiers

LOB

Line of Business

LOE

Level of Effort

LOS

Line of Sight

LPBH

Long Power Button Hold - in reference to MANUALLY_INITIATED_POWER_BUTTON_HOLD (Bug Check 0x1C8) that is typically generated when the user presses and holds the power button for a long time to turn system off. search also LPBH on osgwiki.com

LPC

Low Pin Count (https://en.wikipedia.org/wiki/Low_Pin_Count) (Bus) - Ironically not really "low-pin" by today's standards, the LPC bus is a legacy system bus similar to ISA and used to communicate with the Embedded Controller and TPM on our devices.

LPC

Linear Predictive Coding https://en.wikipedia.org/wiki/Linear_predictive_coding

LPY

Last Pass Yield - Measure of total volume of good devices created relative to number of devices started or material consumed. LPY is not used as a metric in Devices Manufacturing, in favor of using more comprenesive metrics of Manufacturing Scrap Cost and Output/Packout versus POR commitment. See Manufacturing Yield.

LRD

Limited Risk Distributor

LRR

Low Refresh Rate. This is a feature to drive the panel into lower refresh rates while in PSR. Different panels have different capabilities - e.g. Laptop 3 is capable of 20Hz, while Pro 7 is only capable of 30Hz.

LSL

Lower Spec Limit - See also Gage R&R

LSV

Lowest Supported Version - The lowest supported version that a firmware will accept for update (usually set for security reasons to prevent rollback to an insecure version)

LT

Leadership Team - For an example in the MTE organization, this is Michael Maston and his direct reports.

LTB

Last time Buy

LTE

Long-Term Evolution

LTM

Local tone mapping

LTPD

Lot Tolerance Percent Defective

LTS

Last Time Ship
Low Temperature Solder

LUA

Lua

Lua is Portugese for moon, the language is frequently found in embedded systems development. programming language on Wikipedia (https://en.wikipedia.org/wiki/Lua_(programming_language))

Lumens

Lumens is a general term describing light output, but for video projectors, the most accurate term to use is ANSI Lumens (ANSI stands for America National Standards Institute).

LUT

Look Up Table. In Display, it is a table that is used to convert 1 value/color to another for a particular purpose.

LVP

Local Video Playback test, for measuring battery life.

M

M&S

Manufacturing and Sourcing - See "MDO". Former name of the manufacturing org under Nino Storniolo, changed to "MDO" on March of 2023 to reflect the augmented scope is the larger organization of which MTE is a part.

m

meter

MAC

Media Access Control Layer or M365 Admin Center

MACH

Microsoft Asia Center for Hardware - The MACH team is in China. Team that produces PC Accessories. They (for example) write component firmware update drivers using DMF for mouse and keyboard.

MAD

Material Availability Date

MAP

Make A Plan - also seen as MAP Day, often when talking with an external partner on new technology.

MatrixV2

New format that the Windows 19H1 OS has defined to give color targets from DES to Graphics driver.

MAX

Microsoft Supply Chain Analytics Experience - is the platform that supports business intelligence and data science for devices at Microsoft

MB

Motherboard - The main board in a computer (separate daughter boards may plug into it.)

MBB

Manufacturing Base Build

MBN

Mobile Broadband Network

MC3

Manufacturing Change Control & Configuration on this wiki

MCC

Missile Control Center

MCRB

Manufacturing Change Review Board - Process for reviewing, qualifying, and implementing changes to product post-DVR. See MCRB (https://deviceswiki.com/wiki/MCRB)

MCT

Manufacturing Combined Test - MTE test station?

Manual Consumer Test

MCU

Microcontroller (Unit) (https://en.wikipedia.org/wiki/Microcontroller) - SAM and KIP are MCU's. A microcontroller contains one or more CPUs (processor cores) along with memory and programmable input/output peripherals. A computer on a single chip.

MD

Manual Delivery

MDFSS

Magnetic Disk File Subsystem

MDM

Master Data Management

MDO

Microsoft Devices Operations - Organization tasked with executing all aspects of the manufacture and fulfilment of Microsoft hardware products. MDO's mission is to enrich work, life, and play by bringing iconic Microsoft products to life. Previous implementations of this function referred to as MnS, M&S, MSC, or MSCIS

MDP

Material Drive Plan - Plan to buy materials. Higher or equal to FG (finished goods) plan. Microsoft Devices supply chain holds a monthly business review on current projections and commitments of ending inventory, decisions, risks and mitigation for the Surface, Xbox, and Innovation business. In preparation, a two-week process is conducted every month to gather data/inputs and to review the calculated results to ending inventory.

MDS

Manufacturing Data System - MDS is the new data storage/retrieval system for Manufacturing. See also MTP

ME

Mechanical Engineering on this wiki

Intel® Management Engine (https://software.intel.com/en-us/blogs/2011/12/14/intelr-amt-and-the-intelr-me/) is a microcontroller located within the PCH which runs even when the machine is powered off. Also may be known as CSME or TXE. See also SPI and RFI. Related to Intel Sensor Hub.

MEFE

Enclosures and Finishing. Formerly Quality and Mechanical Finishing Team.

MEMS

Microelectromechanical systems (https://en.wikipedia.org/wiki/Microelectromechanical_systems) - is the technology of microscopic devices, particularly those with moving parts.

MESC

Material and Equipment Standards and Code

MFA

Materials & Failure Analysis

Multi-Factor Authentication

MFG

Manufacturing

MFP

Minimum Fantastic Product - these are work items in Azure DevOps that capture the key features of a product that we must deliver. These are identified by senior leadership and then the work required to deliver them are broken out to respective teams.

MHC

MHC ICC Profile

MHC Tag

Microsoft Hardware Color calibration

It is a tag that can be associated with an ICC Profile to provide Windows certain information about the profile.

MHC2 Tag

Microsoft Hardware Color calibration variant 2

A new private tag is defined to store information that is not defined in existing public tags. This tag also stores state for the color transform pipeline.

MHCE Tag

Microsoft Hardware Color calibration with Enhancements

A new private tag defined to allow a single advanced color ICC profile to specify multiple sets of color pipeline states. The MHCE tag contains each set of state as well as information about which set should be used in a scenario.

MHCP

Microsoft Hardware Compatibility Publisher. as in "Signing, Signature, Certification" pptx linked from https://surface/SW%20Wiki/Home.aspx (https://surface/SW%20Wiki/Home.aspx)

MHz

Megahertz

Milestone

E2E program milestone

MIOL

Microsoft Ireland Operations Limited

MIL-HDBK

Department Of Defence Handbook

MIL_STD

Department of Defence Test Method Standard

milinits

1/1000th of Nit

MIMO

Multiple-input and multiple-output

MIPI

Mobile Industry Processor Interface - A standard that defines industry specifications for the design of mobile devices such as smartphones, tablets, laptops and hybrid devices

MK

Mock up

mm

millimeter

MMD

Microsoft Managed Desktop Service (https://docs.microsoft.com/en-us/microsoft-365/managed-desktop/service-description/?view =o365-worldwide)

MMIO

Memory-mapped_I/O (https://en.wikipedia.org/wiki/Memory-mapped_I/O) - For example, the control and status registers of a perhipheral chip may be mapped into the physical memory of the CPU so a KMDF driver can read/write them thereby controlling/reading status of the peripheral.

MMR

Milestone Management Review

MnS

Manufacturing and Sourcing - See "MDO". Former name of the manufacturing org under Nino Storniolo, changed to "MDO" on March of 2023 to reflect the augmented scope is the larger organization of which MTE is a part.

MOBB

Mobile Broadband (i.e. LTE)

MoBo

Motherboard - the main circuit board in a personal computer. A secondary smaller printed circuit board attached to the main mobo is referred to as a "daughter board."

MOET

Order Entry Tool for Commercial Orders

MOO/SOC

Microsoft OEM Online - Software Order Center. The Microsoft OEM Online - Software Order Center (MOO/SOC) are services from Microsoft that provides a listing of updates that may be distributed over a corporate network. Customer can use it as a one-stop location for finding Microsoft software updates, drivers, and hotfixes. It allows search on a variety of update fields and categories which include the update title, description, applicable products, classifications, and knowledge base articles. OEMs get their bits via MOO/SOC channel. Bug Fix packages are posted to WU and to catalog. Servicing packages normally do not go to MOO/SOC. In MOO/SOC, access is limited to authorized users and content is filtered based on licensing agreements. Content from MOO/SOC can be distributed by the OEMs

MOT

Modes of Transportation

MOVE

Web based portal used in commercial space for entering orders. Tool for order validation, Order passed via E-Track. MOVE is invisible to customers. OAM to action in case of rejection.

MP

Mass Production

MPC

Microsoft Partner Connect

MPV

Material Provided to Vendor - materials kept in vendor locations for producing bundles. This is very similar to Vendor Consigned Inventory, but used for producing bundles

MPQ

Master Pack Quantity

MQR

    May Quarterly Release (SAP)

MRB

    Manufacturing Review Board

MRP

    Material requirements planning - is a computer-based inventory management system designed to assist production managers in scheduling and placing orders for items of dependent demand.

MRP Controller

    Material Requirements Planning Controller - is a mandatory field in SAP Material Master

MRS

    Microsoft Regional Sales

MRT

    Manufacturing Retail Test - sampling final SW/HW integration test at end of MTE line

ms

    millisecond

MS

    Microsoft
    Mobile Station
    Modern Standby (https://docs.microsoft.com/en-us/windows-hardware/design/device-experiences/modern-standby) - is the Windows 10 evolution of Connected Standby which originated in Win8. Modern Standby expands the Connected Standby power model and allows more system designs to reduce power consumption while still allowing "instant on" functionality. See also CS

MSA

    Measurement System Analysis - MTE test of Software & Hardware for non-repeatability. See also Gage R&R
    Microsoft Account - Within the context of Surface OS images, this is your "Personal Account"

MSC

    Manufacturing and Supply Chain - See "MDO". Former name of the manufacturing org under Nino Storniolo, changed to "MDO" on March of 2023 to reflect the augmented scope is the larger organization of which MTE is a part.

MSCMS

    Microsoft Color Management System

MSHW

    Microsoft Hardware. Refers to a 4-byte ID used in ACPI/ASL for MS devices used in our platforms (eg. Blades, SAM, etc).

MSD

    Manufacturer Ship Date - The date Microsoft starts shipping new products to channel partners. There are no restrictions on when partners can begin selling products.

MSDS

    Material Safety Data Sheet

MSI

    Windows Installer (originally Microsoft Installer) used for the installation, storage and removal of software, drivers and firmware capsules. Installation packages (with .MSI extension) can be installed on a target PC using the client-side MSI installer service.

MSPN

    Microsoft Part Number - (for example) an identifier for a part soldered onto a Surface product's motherboard; a unique identifier used to coordinate between our EE teams, supply chain teams, manufacturing teams, etc.

MSS

    Management Self Service

MST

    Multi Stream Transport. See Display Basics

MTBF

    Mean time between failures (https://en.wikipedia.org/wiki/Mean_time_between_failures) - Mean Time Between Failures is the predicted elapsed time between inherent failures of a repairable mechanical or electronic system, during normal system operation. MTBF can be calculated as the arithmetic mean (average) time between failures of a system. The term is used for repairable systems, while Mean Time To Failure (MTTF) denotes the expected time to failure for a non-repairable system. See also MTTF MTTR Bathtub Curve

MTC

    Manufacturing Technology Center

MTE

    Manufacturing Test Engineering - the process of getting manufacturing set-up and testing components and E2E scenarios to ensure quality before shipping units out; also refers to a special mode of software on engineering units that allows diagnostics to be run
    A Microsoft Organization under Michael Maston within Manufacturing and Sourcing, that is responsible for architecting, building, and supporting test solutions (hardware and software) for identifying manufacturing defects in Microsoft's hardware products.
    Manufacturing Test Engineering on this wiki
    Now called MTI

MTF

    Modulation Transfer Function

MTEOS

    Windows OS image used on the manufacturing line

MTI

    Manufacturing Test Infrastructure (see MTE)

MTK

    In the context of RF power and SAR, MTK refers to parts of Asia that have a different set of requirements than the U.S. or European Union.

MTK

    Media Test Kit (XBOX One Controller Related)

MTP

Manufacturing Test Point - an electrical pin on a PCBA that a Rafla or other manufacturing test station can attach to. A generic test point on a PCBA can be accessed using an oscilloscope (for example) but an MTP has special requirements which are generally 1)bigger footprint so the clamshell jig has greater success of connecting and 2) located on the underside of the board.

Manufacturing Test Platform - is MTE's Common Software Platform (CTP) - an extensible and intelligent cloud-based software platform for creating and managing manufacturing tests at scale. See also MDS CTP and Common Test Platform on SharePoint (https://microsoft.sharepoint.com/teams/MTEHub/CTP/)

MTP

Media Transfer Protocol

MTTF

Mean Time To Failure - it is recommended to use Mean Time To Failure (MTTF) instead of Mean Time Between Failure (MTBF) in cases where a system is replaced after a failure ("non-repairable system"), since MTBF denotes time between failures in a system which can be repaired. See also MTBF MTTR Bathtub Curve. Source: Mean Time Between Failures on Wikipedia (https://en.wikipedia.org/wiki/Mean_time_between_failures#Variations_of_MTBF)

MTTR

Mean Time To Repair - is a basic measure of the maintainability of repairable items. It represents the average time requried to repair a failed component or device. Expressed mathematically, it is the total corrective maintenance time for failures divided by the total number of corrective maintenance actions for failures during a given period of time. See also MTBF MTTF Bathtub Curve. Source: Mean Time To Repair on Wikipedia (https://en.wikipedia.org/wiki/Mean_time_to_repair)

Mean Time To Recovery is the average time that a device will take to recover from any failure. Examples of such devices range from self-resetting fuses (where the MTTR would be very short, probably seconds), up to whole systems which have to be repaired or replaced. See also MTBF MTTF Bathtub Curve. Source: Mean Time To Recovery on Wikipedia (https://en.wikipedia.org/wiki/Mean_time_to_recovery)

Mu (Greek letter μ)

Shipping and maintaining a UEFI product is an ongoing collaboration between numerous partners. Project Mu also tries to address the complex business relationships and legal challenges facing partners today. open-source UEFI project on github (https://microsoft.github.io/mu/)

Mura

A term that describes the "clouding" effect that can be observed on liquid crystal flat panel displays. Mura on this wiki

Mux

Multiplexer - an electrical component that can select any of several inputs to be routed through to its output lines. If several components in a design should be available for debugging or access, a mux can simplify access the various components: the mux is set-up to select which component should be accessible thereby making many component accessible from a single output port.

MVA

Multiple Voice Agents - is a device that is capable of processing several VPA and perhaps even enabling WOV for several VPA's. For example, a device can process both "Hey, Cortana..." and "Hey, Alexa..." requests.

MW

Middleware - In the context of touch, the MW is software that runs on the device CPU by the Heat infra (HeatCore.dll), the component gets the touch & pen data from the digitizer, processing and report it to the OS - called also "HeatProcessor". Heat Environment

N

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NAND

NAND may refer to a type of non-volatile flash memory - see also NOR

NB

Node B

NCM

Network Control Manager

USB NCM is the protocol for USB to Ethernet

NEO

New Employee Orientation

NEXT

Near-end crosstalk. See also FEXT

NFC

Near Field Communication - Wireless connectivity technology that enables short-range communication between electronic devices

NFF

No Fault Found - Possible Repair and Return (RnR) determination of returned device. See also NFR

NFR

No Fault Return

Not For Retail

Nit

A unit of brightness

NOBG

No boot guard

NOR

NOR may refer to a type of non-volatile flash memory - see also NAND

NMI

Non-Maskable Interrupt - An interrupt that cannot be masked by the system, and usually indicates a fatal hardware error. Can be used to trigger a WHEA_UNCORRECTABLE_ERROR bugcheck.

NPI

New Product Introduction - See also Tim McGuiggan (http://who/is/mcguigga) or Marc Papson (http://who/is/marcpap)

NPO

NPS

New Product Onboarding - A term used to denote the process of transitioning product support to the PLE team

Net Promoter Score - used as a proxy for gauging the customer's overall satisfaction with the Device - see also Devices Power Metrics

NPTH

Non-Plated Thru Hole

NPU

Neural Processing Unit - aka AI accelerator - a specialized chip or subsystem on a CPU that's designed to accelerate artificial intelligence and machine learning applications - for example, eye gaze correction could make use of an NPU - see also TechTalk from 20210205 by Philip Barnes

NQR

November Quarterly Release (SAP)

NRE

Non-Recurring Engineering (https://en.wikipedia.org/wiki/Non-recurring_engineering) - Non-recurring engineering (NRE) refers to the one-time cost to research, develop, design and test a new product. When budgeting for a new product, NRE must be considered to analyze if a new product will be profitable.

NRF

Non-Reproducible Failure(s) - a failure that occurs intermittently rather than in a reliably reproducible manner - A failing device test result which cannot be attributed to any device hardware failure, typically related to factory tests or field returns. NRF Rate is a metric used to indicate retest-only successes in the production test environment, representing lost test capacity. Related to https://deviceswiki.com/wiki/Factory_Retest_(OLR)

NSA

Normalized Site Attenuation

NSMD

Non-Solder Mask Defined

NTD

Need to Drop. A common phrase sent in the chat of an online meeting when someone needs to leave the meeting before it is over.

NTO

No Touch Order

NTRIG

This is the touch controller that we have on our products. NTRIG is a name of a company that Surface acquired.

NVH

Noise, Vibration, and Harshness

NUD

NUDD

NUDs

nuds

New, Unique, Different, or Difficult - a term used by product development teams or DfX to describe new features of a product that pose engineering or manufacturing challenges - see also NUDs Process Overview

NVS

Non-Volatile Storage (UEFI). This refers to a table that is handed off from UEFI to ACPI/ASL code. It contains configuration that UEFI sets during boot time that ASL code may need.

NVME

Non-Volatile Memory Express (https://en.wikipedia.org/wiki/NVM_Express) - NVM Express, NVMe, or Non-Volatile Memory Host Controller Interface Specification (NVMHCI), is a logical device interface specification for accessing non-volatile storage media attached via PCI Express (PCIe) bus. "NVM" stands as an initialism for "non-volatile memory", which is commonly flash memory that comes in form of solid-state drives (SSDs).

NVVDD

GPU Voltage regulator power delivery

NW

NetWeaver

NWA

Netweaver Administrator

NWDI

NetWeaver Development Infrastructure

O

OA

Operating Assumption

OA3

OEM Activation system version 3.0 (https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/oem-activation-3) - OA3 enables an OEM to develop a "product license" inventory management system to manage ordering Windows product keys. The OA 3.0 tool is used on a manufacturing line to create a hardware association that joins a single Microsoft-issued Windows product key to a single computer. see also Ezhilan Rasappa's TechTalk from June 19, 2019

OBA

Out-Of-Box Assessment - a type of quality assurance test performed during manufacturing, where a subset of a collection of devices are randomly smoke tested (typically around 10% of the collection) to affirm the quality of the overall product.

Out of Box Audit

OBC

Order Book Coordinator

OBE

Out of Box Experience - The first thing that the user goes through to setup device

OC

Operating Charactaristic/Curve

OCA

Optical Clear Adhesive - a bonding technology used in touch panels and display devices to bind the cover lens, plastic, or other optical materials to the main sensor unit or each other.

OCP

Over Current Protection

OCR

Optical Character Recognition - is a Machine-learning based OCR techniques that allow users to extract printed or handwritten text from images.

ODM

Outsource Development Model - One of several development / manufacturing models and partnership models. See also CM BDM ODM XDM
Original Design Manufacturer (https://en.wikipedia.org/wiki/Original_design_manufacturer) - a company that designs and manufactures a product, as specified, that is eventually rebranded by another firm for sale.
Outsourced Design and Manufacturing

ODS

Opportunistic Disconnected Standby

ODT

Onsite Device Testing. Sampling qualification test of final SW, HW, and MFG Process prior presented during PQS as part of the data needed by the SLT to give the green light for Mass Production (MP)

OEM

Original Equipment Manufacturer

OER

Object Event Repository

OKR

Objectives and Key Results (https://microsoft.sharepoint.com/teams/DSE/SitePages/objectives-and-key-results.aspx) - framework for setting and tracking goals and their outcomes; create alignment and engagement around measurable goals; provide clarity and alignment in a transparent way across the entire organization; OKRs are not meant to cover everything we do; OKRs are not synonymous with a performance tool.

OLED

Organic Light Emitting Diode

OLR

Online Retest - A method to retest a device which fails production manufacturing test without sending that device to repair. See https://deviceswiki.com/wiki/Factory_Retest_(OLR)

OM

Order Management

OMM

Optical Measuring Machine - Expensive, but provides very accurate measurement

OnePDM

Tool that is used for Product Data Management of Microsoft devices within the larger Product Lifecycle Management framework. See also PLM PDM and OnePDM on this wiki

OOB

Out-of-Band - management or other communication that occurs separate from a regular data channel

OOBE

Out of Box Experience - The Windows OS experience that customers use to initially set up their device, create an account, etc.

OOR

Open Order Report

OpEx

Operating Expense

OPM

Windows version of DRM (Digital Rights Management) is called play ready. OPM means provisioning of the play ready DRM

OPK

OEM Preinstallation Kit. Often mentioned in the context of Office e.g Office OPK, but not restricted to that specifically.

OPS

Operations

Optical Path

As described in Camera MTE Hardware Requirements

Optimus

Optimus is a type of station used on a manufacturing line. Other types include Rafla and Primus (which may just be legacy stations from the Nokia acquisition.)

OQC

Outgoing Quality Control - is concerned with the finished goods ready for shipment. Suppliers will perform an OQC check at their facility prior to shipping raw materials or components to our factories. See also IQC

Order Scrub

Report provided by OM to Channel Manager including all unconfirmed orders, reasons, and actions needed

ORT

Ongoing Reliability Test. It is the reliability test conducted in both ramp phase and sustaining stage to ensure mass produced products meet or exceed the reliability level qualified and monitor any process/material shifts. Note that some T2s also call reliability tests during NPI stage as ORT, but at Microsoft, it means reliability tests in MP. Also see in Reliability Engineering

OSD

On-Screen Display - "extra" text that can appear on screen without the OS knowing about it. An example is Surface Hub when some buttons are pressed, On-Screen text is Displayed to indicate the new system setting (e.g. volume or brightness level).

OSI

Outsourced Supplier Investment

OSS

Open-Source Software - We open-sourced DMF; we use OSS in our products. Open Source on this wiki

OTA

Over The Air

OTID

One Thing Interface Device - as in Jupiter 397262, "There are OTID mechanical changes..." on hdgtfs (https://hdgtfs/tfs/Surface/Jupiter/_workitems/edit/397262)

OTP

One Time Programming
Over Temperature Protection

OTS

Off The Shelf

OVP

Over Voltage Protection

OVR-M

Voltage regulator control for GPU

P

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PA

Power Amplifier

PAC

Practical Architecture Committee - is comprised of decision makers in SCE and Devices, and exists to provide a forum to resolve controversial team-level decisions, and to create visibility into architecture for the organization, especially by ensuring architecture is reflected in designs
Packaging and Content on this wiki

Palace

pronounciation for Pallas - a system to request budget for a program, tool for bottoms-up cost forecasting

PAN

Personal Area Network Profile

PAR

Product Area Reviews. Acronym that Windows uses for a cadence of high level reviews

PAT

Personal Access Token - in the context of accessing Azure DevOps, a PAT is a token that is used to allow a process to access the secured information (Bug details, Git repo, etc.) see also Securing PAT Usage
Projected Active Time - in the context of DASH reports, PAT is one of the metrics reported for self-host users see also Surface_Telemetry_Insight_Index#Power_.26_Battery

PBI

Power BI - a platform for creating reports and dashboards

PBR

Push Button Reset - is microsoft's inbox OS reset solution. In this context, it's basically a clean re-install of the OS with some predefined OEM customizations reapplied.

PC

Personal Computer

PCA

Personal Computer Accessories

PCB

Printed Circuit Board (https://en.wikipedia.org/wiki/Printed_circuit_board) - the board (e.g. a mother board) onto which components are soldered, etc.

PCBA

Printed Circuit Board Assembly (https://en.wikipedia.org/wiki/Printed_circuit_board) - A PCB populated with electronic components is called a printed circuit assembly (PCA), printed circuit board assembly or PCB assembly (PCBA).

PCBA-FCT

Printed Circuit Board-level Functional Test System

PCBA Functional E2E

Measure of yield of the PCBA functional stations - Multiple "Final Yield" of each PCBA functional stations. For example, for Krown project, Pcba Functional E2E = Final Yield (K_BatteryFWLoad) * Final Yield (K_MBICT) * Final Yield (K_FirmwareLoad) * Final Yield (K_OSLoad) * Final Yield (K_MainPcbaFct) * Final Yield (K_PcbaRF).

PCC

Predictive Charge Control - a feature involving MCU firmware and a machine-learning service that uses an artificially intelligent approach to re-charging a battery to improve battery lifetime while meeting user expectations about battery life

PCD

Platform Configuration Database - A platform-specific constant/variable data store used in UEFI. Used for configuration of the UEFI code on a per-platform basis

PCH

Personal Computer Hardware
Platform Controller Hub (https://en.wikipedia.org/wiki/Platform_Controller_Hub) - Chip architecture that Intel uses to connect Intel 5 CPUs to MB The Intel Management Engine was also moved to the PCH... on Wikipedia (https://en.wikipedia.org/wiki/Intel_Management_Engine)

PCIe

Peripheral Component Interconnect Express - It is a serial expansion bus standard for connecting a computer to one or more peripheral devices

PCM
Protection Circuit Module

PCR
Post-Consumer Recycled or Post Consumption Recovered from some publications

PCS
Profile Connection Space

PCT
Power Cycle Test

PD
Power Delivery. https://www.deviceswiki.com/wiki/USB#Power_Delivery

PDB
Program Database - a file name extension (.PDB) for symbol files used by software debuggers.

PDM
Product Data Management - is focused on capturing and maintaining information on products and/or services through their developmentand useful life. See also OnePDM

PDO
Physical Device Object - as in MDSN article "Device nodes and device stacks" (https://docs.microsoft.com/en-us/windows-hardware/drivers/gettingstarted/device-nodes-and-device-stacks), note that "The PDO is always the bottom device object in a device stack."

PDR
Product Definition Review

PDR
Platform Data Region
Flash Regions only exist in Descriptor mode. The controller can divide the SPI flash in up to five separate regions (this being one)

PDT
Parameter Description Table - as in comment in PES ISH driver code, "Get calibration data from PDT". Its like a sensor layout configuration - we'd like to have a common PDT for both J-WiFi and J-LTE.

PDU
Power Distribution Unit

PE
Product Engineering - Engineering team within MDO that is accountable for the operational success of in-market product. Example deliverables include production yield improvement; recovery of defective devices; investigating field quality concerns; driving operational improvements into design, process, and test; and resolving factory-blocking issues. Team has staff located in Suzhou and Redmond. See also Product Engineering.

PECI
Platform Environment Controller Interface (https://en.wikipedia.org/wiki/Platform_Environment_Control_Interface) - A system bus used for thermal management

PEP
Power Engine Plugin (https://www.ditii.com/windows-8-introduces-power-engine-plug-in-pep-for-soc-systems/57853/)
Platform Extension Plug-in (https://docs.microsoft.com/en-us/windows-hardware/drivers/kernel/platform-extension-plug-ins--peps-) - PEP constraint defined in ACPI, tells the OS which devices may enter HW DRIPS, and have a driver that can handle this.

PER
Packet Error Rate
Purchase Expenditure Request

PES
Proximity Envelope Sensor - e.g. some Surface devices have an Analog Devices ADUX1050 that triggers when an object is near; used for SAR compliance; aka Meat Sensor.

PEI
Pre-EFI Initialization - a UEFI Term for the second phase of booting where basic platform setup and memory initialization is performed.
The second stage of UEFI boot consists of a dependency-aware dispatcher that loads and runs PEI modules (PEIMs) to handle early hardware initialization tasks such as main memory initialization and firmware recovery operations. Additionally, it is responsible for discovery of the current boot mode and handling many ACPI S0ix/ACPI S3 operations. In the case of ACPI S0ix/ACPI S3 resume, it is responsible for restoring many hardware registers to a pre-sleep state. PEI also uses CPU cache as RAM.

PEIM
PEI Module - The equivalent of a DXE driver, but for the PEI phase of UEFI?

PER
Production Equipment Requisition

Pfam
Product Family Name

PFN
Page Frame Number (https://rayanfam.com/topics/inside-windows-page-frame-number-part1/)

PGI
Post Goods Issue

PHMS
Projected Hours of Modern Standby

PHY
Physical Layer

PI
Poly-Imide - part inside LCD panel

PID
Proportional Integral Derivative (control system) (https://en.wikipedia.org/wiki/PID_controller) - used to set a system to an output goal

PIDL

Payment Instrument Description Language. See https://microsoft.sharepoint.com/teams/PaymentExperience

PII

Personally Identifiable Information

PINC

Plugged In Not Charging

PIO

Programmed Input/Output (https://en.wikipedia.org/wiki/Programmed_input/output) - method of transferring data between the CPU and a peripheral (e.g. our SAM microcontroller) - each data item transfer involves the CPU for every transaction. In contrast, Direct Memory Access (DMA) operations do not involve the CPU in each item in the data transfer; DMA uses a buffer and the memory management unit will interrupt/signal the CPU when the buffer is full.

PKPN

Product Key Part Number

PixelSense

Microsoft PixelSense (https://en.wikipedia.org/wiki/Microsoft_PixelSense) is an interactive surface computing platform that allows one or more people to use and touch real-world objects, and share digital content at the same time.
The term is also used to describe the superior display quality of panels that we ship with Surface product such as Pro, book, laptop, without really quantifying what is superior about them.

PL

Product line
Price List

PLC

PCL is Intell Platform Component List. It is published for every generation of SoC showing components that have been tested during validation or as part of a plug fest. It is published here (https://modernstandbypartnerportal.intel.com).

PLDR

Platform-Level Device Reset (https://docs.microsoft.com/en-us/windows-hardware/drivers/network/wdi-pldr-and-fldr) - A reset event that is initiated by the Windows Wireless subsystem to reset an IHV's firmware/driver that appears to be hung/broken.

PLE

Post-Launch Engineering - an organization of engineers, PM's and others who are responsible for any changes that are made to a project once it ships. They provide "service-after-the-sale" (e.g. sustaining engineering fixes for in-market products.)

PLM

Product Lifecycle Management - is the process of managing the entire lifecycle of a product from inception through engineering design and manufacture, to service and disposal of manufactured products.
PLM integrates people, data, processes and business systems and provides a product information backbone for companies and their extended enterprise. See also OnePDM

PLR

Product Launch Readiness

PM

Project/Program Manager

PMC

Intel's Power Management Controller is responsible for platform power management.

PMI

Power Meter Interface - a Windows API for collecting power monitor readings from the motherboard - see also this (https://docs.microsoft.com/en-us/windows-hardware/drivers/powermeter/power-meter-interface) docs.microsoft article

PMIC

Power Management Integrated Circuit (http://en.wikipedia.org/wiki/Power_management_integrated_circuit) - as in SMonitor.exe help text: "Read the Lid State of the PMIC"

PMO

Project Management Office

PMP

Project Management Plan

PMU

Power Management Unit

PO

Purchase Order

PoC

POC

Point of Contact - the person who should be contacted if an individual has a question about a driver, obtaining an evaluation unit, checking out test equipment, etc. See also DRI
"pock" Proof of Concept - an early evaluation unit intended to get development going but never intended to be a final, shipping product.

POD

Proof Of Delivery

POH

Power-On Hours

Poke-Yoke

Designing a process or product such that it cannot be assembled incorrectly, such as put together backwards. Originates from Japanese for "mistake-proofing."

POP

Proof of Presence - related to multi-factor authentication, proof of presence (via YubiKey) is a requirement for Pull Requests in production code repositories, refer to ZOD - Proof of Presence

POR

Plan of Record - The POR is the "official plan" as last agreed upon by key stakeholders including management. During the development process, issues arise that cause amendments to the POR but these amendments need to be "formally" accepted into

the POR.

POSA
Point of Sale Activation

PoSh
PowerShell - a command-line environment used for writing and executing scripts

POST
Power-on Self-Test - a validation process performed by firmware immediately after a computer (or an electronic sub-system(is powered on. The results of a POST indicate if the hardware and software are functioning correctly.

PPAP
Production Part Approval Process - The set of documentation where supplier data is collected and used to validate process capabilities are acceptable for mass production.

PPAG
Per platform Antenna Gain - Used to compensate for when your antenna gain is lower than the certified module values

PQ
Product Quality - The phase in Product cycle just before release
Product Qualification

PQBIH
See PQ and BIH

PQCi
Product Quality Check-In

PQS
Post Quantum Safe cryptography - https://en.wikipedia.org/wiki/Post-quantum_cryptography

PQS
Product Quality Sign-off - http://ie2e

PR
Pull Request - a GIT/TFS concept to request a merge from a development branch into a managed/official branch (involves completing code review, a validation build and a few other gates and then someone has to accept it)

PRD
Product Requirements Document

PREQ
Purchase Requisition

PRISM
Planning, Release, Investment Management on this wiki

Program
Program is defined in SKU setup template by PLMs based on Code Name for Supply Chain needs. Accenture Planning team input it into SAP APO.

PRS
Product Release and Security (Services) think of it as "PRoduction Signed" - (from MSW glossary) A Microsoft business unit responsible for product release processes, supply chain security, worldwide anti-piracy technology, and product activation operations. as in email from John Bruno, "Have you reached out to the folks at PRS labs who do the code signing work for internal folks?" and in constants like ENABLE_PRS_SIGN_DEVICE

PSA
Pressure-Sensitive Adhesive (https://en.wikipedia.org/wiki/Pressure-sensitive_adhesive) - an adhesive that only requires pressure to be activated (as opposed to something like an expoxy that requires a chemical catalyst)
Public Service Announcement (https://en.wikipedia.org/wiki/Public_service_announcement) - a way of sharing knowledge or tips or otherwise raising awareness of something deemed important

PSLIP
PSLIP stands for Products and Services Launch Integrated Platform
It is a tool comparing between SKU Map data and End Item Tool data to ensure the data is as desired for publication.

PSOC
Programmable System on Chip

PSP
Product-Specific Platform (Rafla) - The part of a Rafla test station that is specific to a particular product like Cambria or Avila. The test equipment can be re-used for future products but the PSP is specific to this specific product. For example, a PCB in the PSP has specific points matching test points on the DUT's PCB.
Product Specific Part

PSR
Panel Self Refresh. The feature introduced in VESA eDP v1.3a. Once enabled, the display is refreshed by its local frame buffer instead of the SOC display controller. This allows the SOC to power-gate the GFX/display controller as well as to reduce the system DRAM retention rate to the idle, so as the platform basline power will be reduced. The display control reports the Vsync to the OS. Once the new frame composition triggers all subsystem to be back to active, and the display exits from the PSR.

PSR2
Selective Panel Self Refresh. The feature is introduced in VEAS eDPv1.5. A subset of PSR, enabling only those area(s) of the panel that are changing to update, thus saving power. Unlike PSR is does require input from the OS

PSU
Power Supply Unit (https://en.wikipedia.org/wiki/Power_supply_unit_(computer)) - converts (for example) 120 V 60 HZ AC wall power to the required (for example) 5V DC power needed by the motherboard, etc.

PST
Power State Transition (test pass) - a test the Surface Fundamentals test team runs - state of drivers is inventoried and 10's of units are transitioned through the power states many times over hours to flush out driver bugs related to power states (S0, D0, D3, modern standby, etc.)

PSU
Power Supply Unit

PTCRB

PCS Type Certification Review Board (http://en.wikipedia.org/wiki/PTCRB) - provides the framework for GSM Mobile Equipment (ME) Type Certification in North America. See also GCF

PTH

Plated Thru Hole

PTL

Platform Technology Leader

PTP

Precision Touch Pad - SurfacePTPFilter on this wiki

Ptr

Transmitted Power

PTS

Physical Temperature Sensor - see also MCU Thermal Subsystem - see also RTS, VTS

PTT

Platform Trust Technology - is firmware based TPM by Intel or Software TPM. See also dTPM

PV

Product Validation. See also e2e

PWM

Pulse Width Modulation. Width of the Pulse that controls the LED Driver Hardware component that drives display luminance.

PXE

Preboot eXecution Environment[7] (https://en.wikipedia.org/wiki/Preboot_Execution_Environment). Related topic: PXE boot validation[8] (https://www.deviceswiki.com/wiki/PXE_boot_validation)

Q

QAM

Quadrature Amplitude Modulation - a method for communicating digital information through the air (e.g. Wi-Fi networks) in an efficient manner

QBR

Quarterly Business Review - all day meeting for PC Hardware

QC

QualComm

QCC

Quality Characterization Complete (FC - Feature Complete changed to Quality Characterization Complete)

QCT

Quality Control Tests. Tests conducted by reliability engineering team during product ramp. It can be thought as an extended version of OBA tests, or a supplementary one to ORT. The sample size of QCT is typically higher than ORT and at the end of the QCT test, passing units are shippable as ASKU units. Unlike ORT which is conducted throughout the entire sustaining stage, QCT typically only runs during ramp. Also see in Reliability Engineering

QCN

Qualcomm Number - a special number flashed in non-volatile memory in the modem that uniquely identifies a device

QCN

Qualcomm Calibration Network https://forum.gsmhosting.com/vbb/f453/qcn-faq-information-collection-tested-qcn-dont-post-other-places-1873029/

QDCM

Qualcomm Display Color Management tool

QLC

Quad-Level Cell - a type of technology used to create flash memory including SSDs more info on Wikipedia

QPM

Qualcomm Package Manager

QoS

Quality of Service

QRC

(Intel Term) Quality Release Cadence

QRR

Quality Resources Review

QS

Qualification sample
Quiet sleep (Smf telemetry - DevicesWiki)

QPR

Quality Program Review

QUIC

Qualcomm Integrated Co-engineering Team - a team led by K2 that works closely with one of our silicon partners

Qψ(θ,φ,f)

Angular power distribution in the ψ-polarization as function of the spherical coordinates and the carrier frequency

R

R/2

Real Time 2 Tier

R/3

Real Time 3 Tier

R&R

Repair and Refurbishment - A reverse logistics process to take returns, fix them and then resell them.

Roles and Responsibilities - Term used to describe who is responsible for what part of a project (e.g. Uday is the DVE PoC, Warren is the RF Dev)

Return and Repair

Response & Supply - SAP term for Supply

Rate and Range - Describe the relationship between WIFI throughput (Rate) and the distance (Range)

RA

Repair Action

RAB

Radio Access Bearer

Rafla

A "test station" on the manufacturing line. MTE PCBA tester originally acquired from Nokia. In this context it refers to a new architecture that we inherited from Nokia, where the boards come into the station on a conveyor belt and automatically seat into the framework. The old design required an operator to manually open a drawer and place the PCB in the unit. See also Optimus which is another type of station used on the manufacturing line.

RAI

Responsible AI (https://www.osgwiki.com/wiki/COSINE_Responsible_AI)

RAN

Radio Access Network

Rank

A "Rank" in the context of DRAM is a set of Banks that live on the same chip. Each Rank has its own interface that needs to be trained for signal integrity (each bank inside a rank share a single interface)

RAS

Row Address Strobe in a DRAM

RB

Radio Bearer - in the context of RF (e.g. cellular data), a Radio Bearer is a "channel" that can carry control or user data - see also wikipedia:Radio_Bearer_in_UMTS

Rollback - in the context of UEFI capsules and CFU, RB refers to packages that "rollback" the firmware for a component - see also CFU

RBD

Reliability Block Diagram

RBW

Resolution Bandwidth

RC

Release Candidate

RCADe

Ration of Cumulative ABS to Devices - a metric used to track program quality; a criteria used to assess a program's ability to exit milestones like Software Reliability (SR)

RCR

Requirement Change Request

RDD

Requested Delivery Date

RDM

Relentless Development Model (https://microsoft.sharepoint.com/teams/surface-team/SitePages/Relentless-Development-Model-(RDM).aspx?xsdata=MDV8MDF8fDE1MTc5MzI4YTJjZDQ1MWUzYjkzMDhkYmI0YWM2YjEyfDcyZjk4OGJmODZmMTQxYWY5MWFiMmQ3Y2QwMTFkYjQ3fDB8MHw2MzgzMDI0MjQ4MjY3ODg3NTV8VW5rbm93bnxWR1ZoYlhOVFpXTjFjbWwwZVZOObGNuWnBZMlY4ZXlKV0lqb2INQzR3TGpBd01EQWlMQ0pRSWpvaVYybHVNeklpTENKQlRpSTZJazkwYUdeUlpd2lWMVFpT2pFeGZRPT18MXxMMk5vWWVhSekx6RTVPalk1TkRSbVpqQTVMVGRpWVdJJdE5EWmpPQzFoWVRsakxxUTmtNMlZoT1dOaU1qbG0TjJVaRjg0TjJOa09UQkJxZDZUzA0TXpreUxUUXhNamt0T1dJeVI5MW1NV0UzWWlRkbU1qazpBOakpBZFc1eExtZGliQzV6Y0dGalpYTXZiV1Z6YzJGbllpTXZNVFk1TkRZME5UWTRNVGt5TlE9PXxlNmI2YTI2MmRhMWU0ZTkzM2I5MzA4ZGJiNGFjNmIxMnwxZDUyZmRkZTkzNTk0ODY4ODM3MjczMjRjNDAzZmYxMQ%3D%3D&sdata=clA2bVdZeURRV01zWklFb2c4ejc0dTVwSmIrb09pQ2s5WFp5V0FnUXptQT0%3D&ovuser=72f988bf-86f1-41af-91ab-2d7cd011db47%2Cmadperry%40microsoft.com&OR=Teams-HL&CT=1694808506904&clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiIyNy8yMzA4MjEyMzEwOSIsIkhhc0ZlZGVyYXRlZFVzZXIiOmZhbHNlfQ%3D%3D)

RE

Reliability Engineering/Engineer - NPI and sustaining engineering team accountable for the quality and reliability of the product through life.

Re-ATP

Manually confirming an order

Rear Camera

DUT Camera on DUT backside, opposite from user

Recovery Mode Update

A-A cable and updateuefi.cmd script

Red

When used in reference to a project: There is an issue(s) that could derail the project but it is being worked and there are mitigation options to close the issue.

OR

There have been changes to scope, schedule, risk or risk mitigation that have not been communicated to Stakeholders.

Reservations

Allocation is replaced with Reservation process that works on the key principle - 'Reserve only when and where needed' that speeds up inventory flow and revenue recognition.

Retest Input

The count of retest results without repair

Retest Success

The count of retest passed results (ErrorCode=0x00000000) without repair

RF

Radio Frequency

RFCOMM

Bluetooth Transport Protocol in the Core Protocol Stack

RFFE

LTE_RF_Front_End - a set of chips: power amplifier modules, antenna tuners, RF switches, diversity receive modules, integrated and discrete filters, multiplexers, etc. to support WCDMA/LTE/LTE-A.

RFI

Request for Information

RFP

Request For Proposal

RFQ

Request for Quotation - a business process in which a company requests a quote from a supplier for the purchase of specific products or services.

RGB

Red Green Blue Color Model (https://en.wikipedia.org/wiki/RGB_color_model)

RKO

Route Keep Out

RMA

Returned Merchandise Authorization

RMS

Root Mean Square

RMT

Rank Margin Testing - A process run in UEFI that tests DRAM signal integrity. Also see "Rank".

RNG

Random Number Generator. A service to generate **secure** random numbers.
Used in Provisioning to generate a DUTs UUID

RnR

Return and Repair. See also R&R
Repair and Refurbishing. See also R&R
Rate and Range. See also R&R

ROB

Rhythm of Business

ROBO

Repair On Behalf Of - see CREW

ROC

Regional Operation Center

RoP

Rest of Platform

ROI

Return on Investment
Regions of Interest

RP

Root Port (ACPI)

RPM

Resource Power Manager - A component in a Qualcomm system.

RPMB

Replay Protected Memory Block is a security feature available with eMMC/UFS or NVMe flash storage device.

RPN

Risk Priority Number
In TFS: Risk Priority Number = Impact * Occurrence & Detectability; Each 1-5
1-24 = Acceptable Risk
25-31 = Moderate Risk
32-125 = Unacceptable Risk

RPR

Reliability Plan Review

RRLT

Reliable Replenishment Lead Time - total time taken to replenish a unit, sum of OLT (Ordering Lead Time), PLT (Production Lead Time), TLT (Transportation Lead Time).

RSD

Requested Ship Date - Date new product begins to ship from the factory in order to meet GA or MSD schedule and volume commitments.

RSM

Regional Sales Manager

RSOC

Remaining State of Charge - the amount of available charge in a battery divided by the maximum charge capacity of the battery

RSR

Reliability Spec Review

rSSD

[9] (https://docs.microsoft.com/en-us/surface/surface-ssd-removal-guide) - Removable SSD - a device storage unit that can be removed by a technician - as opposed to a storage disk that is soldered to a motherboard and therefore not easily

repairable/replaceable. In addition to making Surface devices easier to repair, some (corporate) customers are interested in protecting intellectual property and desire the ability to destroy storage before recycling an electronic device.

RSSI

Receive Signal Strength Indication

RST

Intel Rapid Storage technology

RT

The UEFI hands off to the operating system (OS) after ExitBootServices() is executed. A UEFI compatible OS is now responsible for exiting boot services triggering the firmware to unload all no longer needed code and data, leaving only runtime services code/data, e.g. SMM and ACPI. A typical modern OS will prefer to use its own programs (such as kernel drivers) to control hardware devices. When a legacy OS is used, CSM will handle this call ensuring the system is compatible with legacy BIOS expectations.

RTC

Real Time Clock

RTD3

Runtime D3

RTM

Release to Manufacturing - the final binary version of the software released to the public and the milestone (see http://ie2e) in the Product Development Lifecycle when the final version must be ready.

RTP

Release To Public (WU0 changed to RTP)

RTS

Ready To Send - in the context of hardware flow control, RTS is an indication from endpoint A to endpoint B that endpoint A has data to communicate - it is "ready to send"; see also CTS, UART
Relative Temperature Sensor - see also MCU Thermal Subsystem - see also PTS, VTS

RTS

Ready To Ship

RTV

Returns Turnkey Vendor

RVP

Reference Validation Platform (a term used by Intel)

RvR

Rate vs Range, the throughput between devices as a function of signal loss.

Rx

Receive(r)

RZ

Surface Book base, as in RZ/BD in $/Shared/SW/Drivers/SurfaceDTX/Doc/SoftwareDesign.docx

S

S & Op

Sales & Operations

S0
S1
S2
S3
S4
S5

System Power States (https://docs.microsoft.com/en-us/windows-hardware/drivers/kernel/system-power-states) - See also D0 CS

SA

System Agent (Intel) - Also known as the "Uncore". Everything on the CPU that is not a CPU core or the Graphics engine (eg. L3 Cache, PCIe controllers, Camera ISP units, etc.)

SABR

Semi-Annual Business Review - Vendor focused, twice a year

SAGV

(Intel Term) System Agent Geyserville)

SAF

Ship As Fail - refers to the release of defective EV build devices from repair inventory without repairing to known good state. Shipment of failing devices is undesirable and should be avoided, but the practice may be employed to meet critical development objectives within the build and program schedule.

SAM

System/Sensor Aggregator Module - In the case of a Jupiter, it is a Freescale K22.
On SP4 and older, the System/Sensor Aggregator Module is an ARM microcontroller responsible for aggregating sensor data and communicating with blades and the SurfLink port.
On Studio, see TAM for the equivalent to SAM.
On SP(2017), Laptop, Book2, etc, the SAM basically replaces the Embedded Controller on previous products and handles power management as well. Based on this tweet (https://twitter.com/aionescu/status/815878947200077824?lang=en), "System Aggregator Module" firmware on Surface Pro is similar to Macbook's "System Management Controller" on Wikipedia (https://en.wikipedia.org/wiki/System_Management_Controller).

SAN

Surface ACPI Notify - function driver which is used for communication between ACPI and SAM
Surface ACPI Notify (Driver) on this wiki

SAP

System, Applications, and Products in Data Processing - tool used to manage orders through Supply Chain

SAR

Specific Absorption Rate (https://en.wikipedia.org/wiki/Specific_absorption_rate) - The rate at which electromagnetic energy is absorbed into human tissue is a key metric the FCC regulates. See also PES which is the sensor used to achieve SAR compliance.

Satsuma

Hardware : TCON + Toothpick. It refers to a specific Display Hardware that has a TCON chip and Toothpick integrated into it. Also see Avacado. Satsuma and Avacado are similar, they use a different TCON chip. Satsuma is newer.

SAW

Secure Admin Workstation is a direct mitigation against pass-the-hash, credential theft and credential reuse cyber-attack scenarios. SAWs help change the landscape of administrative access by combating the most common cyber-attacks we face (credential theft via phishing and malware).

SB

Surface book
South Bridge (Xbox)

SBCT

Surface Block Capture Tool - written by SamT, as seen in WinPE output when flashing a new image to a Surface device - See also Package Naming on this wiki

SC

Software Component - a type of work item in Azure Dev Ops

SCA

Supply Chain Analytics Team

SCBT

Supply Chain Business Technologies - The engineering team supporting manufacturing and supply chain for devices at Microsoft. Detailed information about SBCT is here: Surface Block Capture Tool (SurfaceBlockCaptureTool.exe) (https://www.deviceswiki.com/wiki/Surface_Block_Capture_Tool_(SBCT)_SurfaceBlockCaputreTool.exe-)

SCE

Supply Chain Engineering - The new name for the engineering team (formerly SCBT) supporting manufacturing and supply chain for devices at Microsoft
Supply Chain on this wiki

SCH

Schematic - this is usually a .PDF produced by EE using CAD software - it is different than the layout which shows physical locations on PCB - a schematic shows logical connections of pins/signals.
SurfaceCommonHeaders - an effort to centralize the definition of SSH messages so that we reduce duplicate effort across UEFI, MCU firmware, Windows Drivers like the SSH driver and debug tooling like SDF

SCI

System Control Interrupt - An interrupt that can trigger an ACPI event (eg. power button press). Primarily used in EC-based systems.

SCM

Supply Chain Management - In commerce, the management of the flow of goods and services, involves the movement and storage of raw materials, of work-in-process inventory, and of finished goods from point of origin to point of consumption.

SCO

Synchronous Connection Oriented Link

SCOR

Supply Chain Operations Reference - is a process reference model developed and endorsed by the Supply Chain Council as the cross-industry, standard diagnostic tool for supply chain management.

SCP

Surface Communication Protocol - This is the main packet communication format used in the firmware of the many MCUs in the Surface product lineup. This was formally called Surface Serial Hub (SSH), but, as of November 2019, this has been renamed to SCP to detail this packet communication for low level operations. As of March 2021, most of the Surface code still uses the vocabularly "SSH," so the transition to using this new vocabulary "SCP" has been slow.
Short Circuit Protection

SCPL

Surface Catalog Property Lister (https://dev.azure.com/msftdevices/vulcan/_git/SurfaceCatalogPropertyLister) (SCPL - pronounced "scalpel") is a software utility used by Flotilla Manager to obtain publisher information for .CAT files associated with driver packages. Using SCPL, Flotilla Manager can associate Hardware Dev Center submissions for the purpose of "flighting out" drivers and other software/firmware to Surface devices.

SD

Street Date
Special Deal

SDA

Specialized Devices & Applications, or
Surface Deployment Accelerator

SDB

Software-Defined Battery (https://docs.microsoft.com/en-us/windows-hardware/drivers/powermeter/software-defined-batteries) - see also SDB (https://osgwiki.com/wiki/SDB_-_Software_Defined_Battery) article on OSGWiki

SDCM

Surface Dev Center Manager (https://github.com/Microsoft/SDCM) - tool to automate Windows Hardware Dev Center interactions: submitting driver Attestation and WHQL packages, downloading resulting signed packages, etc.

SDF

Surface Debug Framework (SDF) is software that allows Surface engineers (SW/FW devs, DVSE's, etc.) to perform board-level debug operations like (1) observe debug output from SAM -or- (2) flash a new UEFI image

SDL

Service Delivery Lead
Security Development Lifecycle - see also Threat Modeling
Surface Distribution Lab - in building 87 on the Puget Sound campus

SDM

Refers to QualComms Snapdragon chip

SDP

Service Discovery Profile

SDR

Standard Dynamic Range. Also see HDR.

SDR

Surface Device Registration

sDRRS

Seemless Dynamic Refresh Rate Switching

SDT

Surface Diagnostic Toolkit

SDVT

Single DUT Validation Tool - Collection of capabilities within a single Test Suite that can be used in DEV validation of the MTEOS releases.

SDXC

Secure Digital eXtended Capacity (https://en.wikipedia.org/wiki/Secure_Digital#SDXC) - :"...supports cards up to 2 TB (2048 GB), compared to a limit of 32 GB for SDHC cards in the SD 2.0 specification. SDXC adopts Microsoft's exFAT file system as a mandatory feature. "

SEC

SECurity phase (UEFI) - First phase of booting in UEFI before initiating PEI, where initial signature checks are performed. (e.g., Intel ME, AMD PSP, CPU microcode). It consists of minimal code written in assembly language for the specific architecture. It initializes a temporary memory (often CPU cache as RAM) and serves as the system's software root of trust with the option of verifying PEI before hand-off.

SEI

Solid Electrolyte Interphase in a Lithium-ion Battery. It is a protective film formed on the graphite from reaction with electrolyte that protects it from further corrosion.

SEM

Scanning Electron Microscope

SEMM

Surface Enterprise Management Mode (https://docs.microsoft.com/en-us/surface/surface-enterprise-management-mode) - Allows enterprise configuration of UEFI boot options. see also DFCI

SE/LE

Special Edition/Limited Edition

SFB

Software Factory Build (aka Scott Fudally Build) - A software-only milestone where only software updates for the OS image or MTE software are made and validated/green-lighted. An SFB occurs when some subsystems aren't ready for full evaluation during a regular EV build (where hardware is also validated.) Some units are held back from the regular EV to do a targeted factory run that will validate updated software. The end result will be the same physical EV units but with improved provisioning or software components. The SFB milestone validates MTE manufacturing processes and tests before the next EV or DV build.

SFCS

Shop Floor Control System - aka ShopFloor - see also SFIS and Provisioning

SFIS

Shop Floor Information System, JDM1 infrastructure system - see also SFCS and Provisioning

SFLKG

Surface Factory Last Known Good Build Release

SFR

Spatial Frequency Response - Camera test

SFVT

Surface Factory Validation Test - This is a test pass to test functionality of Device Bridge.

SHA

Secure Hash Algorithm

Shipping Conditions

Code within SAP to Indicate Shipping Method and DC SLA

Ship-To

Unique Identifier Number Associated Customer DC/Store locations

SHMD

SurfaceHidMiniDriver (SHMD) - a HID filter driver which subscribes for Keyboard notifications from KIP, and provides HID key reports to Windows HID Class driver.

SHP

SurfaceHotPlugDriver (SHP)

SI

SI PM

Software Integration, Software Integration Program Manager
Responsible for integrating the entire payload of SW, FW bits on a device program.

SID

Surface Integration Driver
Society for Information Display (https://www.sid.org/)

SIDR

SW In-Development Review - a meeting series where software related to in-development products is reviewed by management

SIM

Subscriber Identity Module

SIMBAT

Simulated Battery. This is a mechanism that simulates the system running as if it is on battery power, even though the PSU is physically connected. Refer to Simulated_Battery for more info.

SIP

System in Package

SIR

Surface In-region Repair. See also RnR

Significant Investment Review - a management review of a program requiring substantial investment (e.g. millions spent on Corning glass for updated TDM's that will be assembled by Samsung or Toshiba for the next Surface Pro launch.)

(MTE) Sourcing and financial review - normally happens between ASR and EMV, and MTE is now beings asked to provide PER estimate content.

SIS

Surface Integration Service (SIS)

SIT

System Integration Test - System Integration functional test system - as of 2019, MTE is developing SIT using an Optimus station.

SKIPB

SKIP-B

An MCU used in some Surface products.

SKL

Skylake - An Intel Processor Microarchitecture

SKU

Stock Keeping Unit - Code Used to Identify Specific Product/Material

SLA

Service Level Agreement

SLT

Senior Leadership Team

SMA

Surface-mount Assembly - Module assembled with SMT

SMBIOS

System Management BIOS - UEFI table containing information about the device (run msinfo32.exe to see values): "System Manufacturer", "System Model", etc.

SMBus

System Management Bus - derived from I²C - SMBus is used for communication with low-bandwidth devices on a motherboard, especially power related chips such as a laptop's rechargeable battery subsystem, thermocouples, fan or voltage sensors.

SMC

Surface-mount Components - Components for SMT

System Management Controller (Xbox)

SMD

Surface-mount Device - Active, passive, and electromechanical components

Shared Memory Device (https://projects.osmocom.org/projects/quectel-modems/wiki/Qualcomm_Linux_SMD)

Solder Mask Defined

SME

Subject-Matter Expert - a person who is an authority in a particular area or topic. For example, looking for a Windows Driver SME? Check with the Drivers XPlat team.

Surface-mount equipment - SMT assembling machines

SMF

Surface Manageability Framework - A service and set of drivers that monitor temperature and configure the SoC (CPU) to use lower voltage or clock frequency in order to control temperature (thermal performance.)

SMI

System Management Interrupt - An interrupt that triggers entry into SMM. Can be invoked by a hardware interrupt or by software. See this page.

SMLS

Surface Machine-Learning Service - software that uses machine learning to provide advanced features like Predictive Charge Control (PCC)

SMM

System Management Mode (UEFI) - A special protected mode of the CPU that operates below the Kernel / Hypervisor at ring -2. Primarily used by Windows to invoke UEFI code at runtime.

SMO

Solder Mask Opening

SMP

Surface-mount packages - SMD case forms

SMS

Surface Modern Standby - see Francisco's Tech Talk from 20190510

Short Message Service - the text messages we all know and love that are sent/received on cellphones

SMT

motherboard build

Surface Mount Technology (https://en.wikipedia.org/wiki/Surface-mount_technology) - is a method for producing electronic circuits in which the components are mounted or placed directly onto the surface of Printed Circuit Boards (PCBs). An electronic device so made is called a Surface Mount Device (SMD). It has largely replaced the through-hole technology construction method of fitting components with wire leads into holes in the circuit board. See also components are mounted on the surface of printed circuit boards (PCBs) as opposed to through-hole technology on Wikipedia (https://en.wikipedia.org/wiki/Through-hole_technology)

SNR

Signal to Noise Ratio

SO

Subsystem Owner

SO-DIMM

Small Outline Dual In-line Memory Module - a type of computer memory; SO-DIMMs are a smaller alternative to a DIMM ... often used in systems that have limited space, e.g. laptops.

SOC

(1) System on a Chip (https://en.wikipedia.org/wiki/System_on_a_chip) - A single integrated package containing a CPU plus additional functionality (e.g. Wi-Fi) that traditionally has been packaged separately.

(2) State of Charge - the amount of available charge in a battery compared to the maximum charge capacity of the battery

SOI

Systems of Intelligence - have pioneered a new way of managing data. In short, it refers to cognitive computing systems that ultimately provide actionable data results leveraging machine learning, artificial intelligence (AI), and deep learning technology to apply analytics to data sets in real-time and at massive scale.

Sold-To

Unique Identifier Number Associated to Customer

SOP

Small Outline Package

Standard Operating Procedure

SOR

System of Record - a system of record, or source system of record (SSoR), is a data management term for an information storage system that is the authoritative data source for a given data element or piece of information.

SOSAK

Surface On-Site Assistant Kit - refer to Surface Test Automation

SOW

Statement of Work

SOX

Sarbanes-Oxley Act

SPB

Simple Peripheral Bus (https://learn.microsoft.com/en-us/windows-hardware/design/component-guidelines/simple-peripheral-bus--spb-) - This includes various Serial Buses such as I2C , SPI ... Microsoft has a inbox WDF Class extension for this SPBCx.sys.

Also - as in SPBTestTool in WDK samples

SPD

Serial Presence Detect (https://en.wikipedia.org/wiki/Serial_presence_detect)

SRO

Solder Resist Opening

SPI

Solder Paste Inspection

Serial Peripheral Interface - An inter-chip communication interface. See also I2C, USB and UART

Serial Peripheral Interface (Bus) (https://en.wikipedia.org/wiki/Serial_Peripheral_Interface_Bus)

SPL

Sound Pressure Level

SPP

Serial Port Profile

SPR

Software Program/Platform Review - a project milestone that facilitates mgmt review and approval of a project. Software's equivalent of an ASR. see also Software Milestone Definitions

SQ

Surface Quality

SQE

Supplier Quality Excellence

Supplier Quality Engineer

Ensures components from external vendors meet standards and quality requirements

SQG

Surface Quality Gates - a Surface device quality audit

SRD

Software Requirements Document

SS

System Simulator

SSD

Solid State Drive (Disk)

SSDT

Secondary System Description Table (ACPI) - See DSDT.

SSID

Service Set Identifier

SSC

Snapdragon Sensor Core - Qualcomm system-on-a-chip's feature an SSC sensor hub - compare to ISH on Intel SoC's.

SSH

Surface Serial Hub (Driver) - is a kernel-mode driver used to communicate to the SAM

SSPA

Supplier Security & Privacy Assurance Program (https://microsoft.sharepoint.com/teams/MyProcureWeb/SitePages/SSPA.aspx)

SSRK

Super-Secret Registry Key - a super-secret Registry key can be used in many scenarios; a specific scenario is in Windows Update targeting: in the WU context, an SSRK identifies the "Audience" a Windows client belongs to. The "Audience" is one piece of information the WU back-end uses when determining what Windows Update packages to offer the client.

SST

Single Stream Transport, also see MST. See Display Basics

sTPM

    Secure TPM (See also TPM)

STR

    Sustaining Transition Review - When NPI allows a project to go to sustaining

Strap

    Soft Trap - Basically like fuse setting but in firmware region until end of manufacturing.

SUR

    Same Unit Repair. See also RnR

SUS

    Stainless Steel

SUTPER

    Store Update Test Pass Exit Review - similar to WUTPER or GUTPER, but release to the Windows Store.

SVN

    Secure Version Number - a version number that can only ever be incremented. Protects against rollbacks. May be stored in platform fuses.

SVT

    System Verification Tools - MTE QA tooling to validate tester systems. Customized C# implementation for product and testers

SVTCCA

    Silicon View Technology Closed Chassis Adapter (or BSSB)

SWD

    Serial Wire Debug (https://www.silabs.com/community/mcu/32-bit/knowledge-base.entry.html/2014/10/21/serial_wire_debugs-qKC T) - a bus/interface/protocol used to flash firmware onto parts or control debug in a manner similar to JTAG

SWDRIPS

    Software Deepest Runtime Idle Power State

SW/FW

    Software Firmware Engineering on this wiki

SYNCH

    Synchronization Profile

T

TA

    Tolerance Allocation

TAA

    Trade Agreements Act - There are regulatory needs where certain devices should be manufactured in North America. Manufacturing means "meaningful and substantial change to the device".Trade Agreements Act of 1979 on Wikipedia (http://en.wikipedia.org/wiki/ Trade_Agreements_Act_of_1979)

Takt Time

    Takt Time (frequently pronounced "Tack Time") is the desired time between units of production output, synchronized to customer demand. Takt Time is the average time between production start of one unit and production start of the next in order to meet a rate of customer demand. This is NOT the time it actually takes to make a product. The time to make a product should define allowable takt time. Takt is the German word for the baton that an orchestra conductor uses to regulate the tempo of the music. Takt time may be thought of as a measurable "beat time", "rate time", or "heartbeat".

TAM

    Touch Aggregator Module - Studio's equivalent to the Pro4/Book1 SAM. It handles touch interactions and sensors in the top half of the studio, and also handles firmware updates to the touch devices.

TAS

Time averaged SAR (Specific Absorption Rate) – SAR is computed over a time window using past power levels.

TAT tool

    Thermal Analysis Tool from Intel. See slides (https://designintools.intel.com/Intel_Thermal_Analysis_Tool_Windows_p/iot11.htm)

TAP

Technical Adopter Program serves as an external extension to SH, providing insight and validating assumptions with commercial customers.

TaU tester

    Transmittivity and Uniformity tester - MTE-owned tester placed at TDM supplier to test transmittance and uniformity of IR ink application

TB

    Tablet - Surface Book tablet, as in $/Shared/SW/Drivers/SurfaceDTX/Doc/SoftwareDesign.docx

TB1

    "ToolboxOne" - Is an host tool that part of the MTE and DEV images. this tool communicate with the touch & pen digitizer. running during the production line and for touch & pen scripting during image installations. ToolBoxOne

TBD

    To Be Determined - an issue that has yet to be resolved; a point where clarification is needed

    Top Bottom Debug - a board with a SurfLink connector that exposes debug capability, PCI bus and direct (no hub) USB ports. So called "Top Bottom Debug" because it could sit between a top (tablet) and bottom (base) on a Surface Book.

TC

    Targeted Change - in the context of hardware milestones like EV1, EV2, DV, a TC (Targeted Change) milestone (e.g TC1.5) indicates a subsystem's hardware design is updated from the previous hardware milestone but it is a very targeted change (that was perhaps just a bit too late for the previous hardware milestone)

TCG

Trusted Computing Group (UEFI) - A cross-organization group that drives trusted computing specifications (eg. the TPM specification). Microsoft is a member.

TCON

T-con
Timing controller - is a component in LCD panels to generate the horizontal and vertical timing panel signals. See also Display Basics on this wiki

TCP
Type-C Port - "Verify Charging thru Dock together w/ TCP charger", "Verify TCP Port external 4K display"

TCPM
Type-C Port Manager also called the "PD controller"

TCS
Test Control System - a manufacturing system - MTE folks in Arcade maintain test suites

TDD
Time Division Duplex

TDM
Touch Display Module - refers to the whole touch-and-display assembly.

TDP
Thermal Design Power (https://en.wikipedia.org/wiki/Thermal_design_power)

TDR
Timeout Detection and Recovery (Graphics) (https://docs.microsoft.com/en-us/windows-hardware/drivers/display/timeout-detection-and-recovery) - A TDR occurs when the graphics kernel subsystem (Dxgkrnl.sys), detects that the GPU is taking more than the permitted amount of time to execute a particular task. The watchdog barks by resetting the graphics driver and/or chip. If that doesn't work a BSOD may occur.

tent
A security group for a confidential project. If you're "in the tent" others can share information about the confidential project with you. If you're not "in the tent", it's unlikely we could say anything even if we did know something.

TFT
A Thin Film Transistor liquid crystal Display (https://en.wikipedia.org/wiki/Thin-film-transistor_liquid-crystal_display) (**TFT LCD**) is a variant of a liquid-crystal display that uses thin-film-transistor technology to improve image qualities such as address-ability and contrast. A TFT LCD is an active matrix LCD, in contrast to passive matrix LCDs or simple, direct-driven LCDs with a few segments.

TGL
See Tigerlake

TFA
Two-Factor Authentication (https://en.wikipedia.org/wiki/Multi-factor_authentication) - an authentication process that requires an additional piece of information in addition to username and password

TFCI
Transport Format Combination Indicator

TFS
Team Foundation Server - Work Item Tracking System - Tool used to manage Software Development (Features & Deliverables planning, work item costing and tracking, code management, bug management, etc.) Predecessor to Azure Dev Ops - ADO

TH/TC
Temperature and Humidity / Temperature Cycling - RE tests for prolonged exposure to high/low temperatures and humidity

THC
Touch Host Controller - the new Intel architecture for touch that replace IPT. It defines the Interface towards the touch controller, the protocol above the SPI and the interface to the HID layer. This protocol is implemented by HW inside the SoC and therefor very efficient (power and performance). THC is part of TGL and LKF architectures.

THD
Total Harmonic Distortion

THING
DUT external accessory - keyboard

Tigerlake
Tiger Lake is an Intel CPU microarchitecture based on the third-generation 10nm process node (named "10nm++"). It will replace Ice Lake. Wikipedia (https://en.wikipedia.org/wiki/Tiger_Lake_(microarchitecture))

TIM
Thermal Interface Material

TIS
Total Isotropic Sensitivity, a measure of the average sensitivity of a receiver-antenna system.

TKIP
Temporal Key Integrity Protocol (formerly WEP2)

TL
Team Lead

TLA
three letter acronym
FYI

TLANE

TLane

T-Lane
Transportation Lane - defining mode of transport, duration for a given product between 2 locations. Used in both Planning and Fulfillment Logistics to mean different datasets.

TLDR
Tuesday Leads Development Review - a weekly SW review for programs under development. (Not to be confused with tl;dr)

TMB
Top Main Board

TMC

Freight Management Team

TMS
Transport Management System

TOASt
Tools On A Stick - TOASt is an approach used in PLE and elsewhere to put a device image on a USB stick for the purposes of reimaging one or more DUTs.

Toothpick
IP block (HW) integrated into some TCON Chip. Custom IP block that IL team designs that controls and fixes color for our displays based on calibration. It also implements fast inking.
Also see Satsuma and Avacado
Note: For fastinking toothpick direclty writes to the Display panel. Fast inking is no longer used for newer programs as it is replaced by the new OS feature of gpu inking).

ToT
Top of the Tree - The idea that Surface products should be using the latest-and-greatest drivers, firmware, etc. rather than being stranded on older bits.

TOTP
Time-based One-Time Password - used in Two-Factor Authentication; generated by an app on your phone (e.g. VIP Access from Symantec can be used for TFA on your Fidelity.com login)

Touch PCBA Functional E2E
Measure of Final Yield for Touch PCBA Functional Stations - Multiply "Final Yield" of each Touch Pcba Functional stations. For example, for Krown project, Touch Pcba Functional E2E = Final Yield (K_HomeButtonFWLoad) * Final Yield (K_TouchPcbaICT) * Final Yield (K_TouchPcbaFct).

TP
Team Project - An entity within Azure DevOps that contains source code repos and work item database for tracking Tasks/Bugs.
Devices SWFW Process for Tracking Work on this wiki

TPM
Technical Program Manager
Trusted Platform Module (https://en.wikipedia.org/wiki/Trusted_Platform_Module) - is a chip on systems that stores security secrets and ensures that the system is not compromized.

TPY
Throughput Yield. See also FPY

Trailing Yield
The adjusted figures based on continuously update of online retest

Transmissivity
The amount of light that is passed though a particular material.

TRP
Total Radiated Power, a measure of how much power is radiated by an antenna when the antenna is connected to a transmitter.

TRR
Test Run Reporter is a custom Task that can be added to an ADO Pipeline. It summarizes the results of a test pass in email.

TRS
Total Radiated Sensitivity
Total Isotropic Sensitivity

TRTT
Telemetry Real Time Tool (https://www.osgwiki.com/wiki/TRTT_Developer_Wiki), TRTT Releas Notes (https://www.osgwiki.com//wiki/Telemetry_Real-Time_Tool_(TRTT)_Release_Notes)

TS
Test Suites - Deliverable from MTE for executing manufacturing tests

TSL
Target Stock Level
Transient System Load

This is the stage between boot device selection and hand-off to the OS. At this point one may enter UEFI shell, or execute an UEFI application such as the OS boot loader.

TSP
Touch Sensor Panel
Transient System Load (UEFI) - An optional fifth phase of UEFI booting

TT
Transaction Team

TVC
Total Vendor Cost - one of the metrics that goes into forecasting the budget required to develop a new Surface product

Tx
Transmitter

TXE
Trusted eXecution Engine - Another name for the Intel Management Engine on low power devices

U

U3PE
USB 3.0 Peripheral Emulator - A programmable USB device (like MUTT) that is used in the factory to test USB. It can be programmed as 2.0 or 3.0 device.

UAM
Unified Asset Management - a Dynamics-based platform enabling asset tracking and management

UAT

    User Acceptance Test

UART

    Universal Async Receiver Transmitter (https://en.wikipedia.org/wiki/Universal_asynchronous_receiver-transmitter) - A very simple and cost effective serial bus.

UCM

    Usb Connection Manager - Controls the USB Type-C connector

UCODE

    Microcode - A signed blob that can update the microcode for a CPU

UCSI

    USB Type-C Connector System Software Interface (https://docs.microsoft.com/en-us/windows-hardware/drivers/usbcon/ucsi)

UDC

    Under Display Camera

UDI

    Universal Data Integration

UDK

    UEFI Developer Kit - created by the MSFT BaseOS team, leveraging EDKII, an open source implementation of the Unified Extensible Firmware Interface.

UDP

    User Datagram Protocol

UE

    User Equipment

    Upper Edge (driver) - There's a 2 layer model to drivers: upper and lower "edge."

UEP

    Unified Emulation Partition (Intel CSME)

    The set of fuses stored in the CSME itself

UEFI

    Unified Extensible Firmware Interface (https://en.wikipedia.org/wiki/Unified_Extensible_Firmware_Interface) - A specification that defines a software interface between an operating system and platform firmware. Replaces BIOS firmware

UF

    User Facing (Camera)

UFS

    Universal Flash Storage (https://en.wikipedia.org/wiki/Universal_Flash_Storage)

    Unix File System

UHD

    Ultra High Definition

UI

    User Interface

UL

    Uplink

UMC

    User-Mode Crash - the OS stops a process which violated some basic rule (like "don't divide by 0") which is in contrast to a Kernel-Mode Crash which results in a BSOD (the entire machine resets.) PLE tracks TDR, UMC and LKD in addition to other metrics for in-market devices.

UMDF

    User Mode Driver Framework

UMTS

    Universal Mobile Telecommunications System

Un-fused units

    (boots with red screen), can be updated to production signed UEFI

UOM

    Unit of Measure. An attribute in the material master in SAP

upack

UPack

    Universal Package (an evoluton of NuGet packaging) - Universal Packages are an Azure Artifacts specific package protocol created durint CI builds. They can contain .DLLs, Windows drivers, Firmware images and many other types of software build output. more info on devblogs.microsoft.com at Getting started with Universal Packages (https://devblogs.microsoft.com/devops/getting-started-with-universal-packages/)

Update via capsules

    Installed via the test suite at Run-in or Provisioning

UPH

    Units Per Hour

UR

    User Research - Understanding user behaviors, needs, and motivations through observation techniques, user testing, and other feedback methodologies. See DRIVE User Research Team.

URM

    Under Represented Minorities

USB

    Universal Serial Bus (https://en.wikipedia.org/wiki/USB) - The specification for the cables/ports we all know and love. Type-A, Type-C, micro-USB, etc.

USGA

    United States General Availability - GA within the US.

USL

    Upper Spec Limit. See also Gage R&R

USP

Universal Serial Protocol - Our own proprietary protocol used for SAM, Blades, SurfLink, etc. Uses UART for the physical layer. Not to be confused with USB!!

UT

User Test

UTRA

UMTS Terrestrial Radio Access

UUT

Unit Under Test. See also DUT

UWB

Ultra Wide Band - a very low energy level for short-range, high-bandwidth communications over a large portion of the radio spectrum (more info in Wikiedia Ultra-widebad article (https://en.wikipedia.org/wiki/Ultra-wideband).)

UWD

Universal Windows Driver

UWP app

Universal Windows Platform app

UX

User Experience

V

VAD

Visual Artifact Detection. (Also, VAD2 is the v2 of this station.) The Display DVSE team has created a testing process which uses a series of spot colorimeters to monitor a DUT and detect any anomalies which occur at the point of measurement. For instance, this could be used to look for a flicker during a long idle time, a luxuriance change during boot time due to UEFI to OS hand-off of the logo screen, or a flicker that occurs coming in and out of various display power saving modes.

VAM

Vendor Account Manager

VAS

Value Added Services

VariBright

AMD terminology for Content-Adaptive Backlight Control (C-ABC).

VBIOS

Video BIOS - is the Basic Input Output System (BIOS) of a graphics card or the integrated graphics controller in a computer. The VBIOS provides a set of video-related functions that are used by programs to access the video hardware.

VBS

Virtualization-based Security VBS (https://docs.microsoft.com/en-us/windows-hardware/design/device-experiences/oem-vbs)

VBT

Video BIOS Table - Binary configuration for the Intel Video BIOS originally, inherited to GOP in UEFI. It basically defines what displays are connected to a device. E.g. eDP panel display timing can be hardcoded as panel Display Timing Descriptor (DTD).

VBTS

Virtual Battery Temperature Sensor

VBW

Video Bandwidth

VDI

Virtual Desktop Infrastructure - used in marketing electronic devices like tablets and PCs - refers to ability to have a thin-client (e.g. tablet) that allows a worker to access functionality in the cloud or on a server -

Velocity

feature "sequestration" - a feature in OS images that allows in-development (not completely baked or approved) features to be turned on/off based on criteria like ring (Windows Insider or just MSFT internal?), branch, etc.

Vendor Consigned Inventory

Materials bought by Microsoft and given to vendors for producing finished goods.

VESA

Video Electronics Standards Association. vesa.org (https://vesa.org/)

VHD

Virtual Hard Drive

VHF

Virtual HID Framework - a feature used (for example) by SurfaceButton.sys to process keystrokes for the Windows OS

VID Margining

A test run during XStress that lowers the voltage one VID at a time until a fault occurs, and stores the final VID plus some margin into a secure flash structure to be used by the PSP for subsequent power mode changes.

The required operating voltage for the SOC CPU, GFX, and NBCORE domains is tested by AMD and written into the fuses of each part. AMD determines this voltage by measuring the leakage current on the rail. This voltage setting contains significant margin to account for voltage regulator tolerance, error in the correlation between leakage current and minimum operating voltage (VMIN, end of life guard-band, etc. If we can remove the unnecessary margin it will enable a part that runs with less power, which in turn will be cooler, quieter, and have better reliability.

To remove the margin added for worst case voltage regulator tolerance, we need to search for Vmin after the SOC has been installed on the motherboard. To find Vmin, we need to decrease voltage, and at each step, test a number of the near worst case timing paths near the worst case temperatures.

Reference: Scorpio VID Margining Spec on SharePoint (https://microsoft.sharepoint.com/:w:/r/teams/MTEIEB/Scarlett/_layouts/15/D oc.aspx?sourcedoc=%7BC0D6AB2D-227C-42DB-B369-94D847C3ED6A%7D&file=Mxxxxxxx%20Spec,%20Scorpio%20VID%20Margini ng.docx&action=default&mobileredirect=true&DefaultItemOpen=1)

VMI

Vendor Managed Inventory

VPA

Virtual Personal Assistant (https://en.wikipedia.org/wiki/Virtual_assistant) - :e.g. Cortana, Siri and Alexa. Gartner predicts (https://www.gartner.com/newsroom/id/3464317) total revenue for VPA-enabled wireless speaker devices like Amazon Echo will surpass $2 billion USD by 2020.

VPD

Vital Product Data

vPro

various Intel technologies (https://en.wikipedia.org/wiki/Intel_vPro) - umbrella marketing term used by Intel for various technologies like Intel Active Management Technology (AMT)

VPU

Vision Processing Unit - an emerging class of microprocessor; it is a specific type of AI (Arificial Intelligence) accelerator, designed to accelerate machine vision tasks.

VRR

Variable Refresh Rate. In Video playback, frames rate can be dropped to 48/30 instead of 60 hz to save power

VRTB

Voltage Rail Test Board

VSC

Visual Studio Code - a cross-platform software development editor https://code.visualstudio.com/

VSDB

Vendor Specific Data Block

VSM

Value-stream Mapping, also known as "material- and information-flow mapping", is a lean-management method for analyzing the current state and designing a future state for the series of events that take a product or service from the beginning of the specific process until it reaches the customer. more info on Wikipedia

VSO

Visual Studio Online

VSTF

Visual Studio Team Foundation

VSTS

Visual Studio Team Services

VTS

Virtual Temperature Sensor - see also MCU Thermal Subsystem - see also PTS, RTS

VX

Visual eXperiences. One of the teams in Microsoft Devices who among other things are key contributors for Display calibration

W

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WA

Work Around. An flag used in the UEFI build system to enable/disable workarounds, based on #ifdef blocks.

WACK

Windows App Certification Kit (https://developer.microsoft.com/en-us/windows/develop/app-certification-kit) - Store ingestion prevents use of some Windows API's. Not to be confused with WHCK.

WACG

Warranty and Compliance Guide

WCG

Wide Color Gamut (https://en.wikipedia.org/wiki/Gamut#Wide_color_gamut)

WCOS

Windows Core Operating System (https://osgwiki.com/wiki/Windows_Core) - Same as Factory OS. Bare bones operating system.

WDDM

Windows Display Driver Model - the graphic driver architecture for video card drivers running Microsoft Windows versions beginning with Windows Vista.
Wiki Link

WDF

Windows Driver Frameworks (https://docs.microsoft.com/en-us/windows-hardware/drivers/wdf/using-the-framework-to-develop-a-driver)

WDM

Windows Driver Model (https://msdn.microsoft.com/en-us/library/windows/hardware/ff565698(v=vs.85).aspx)

WDP

Windows Device Portal (https://osgwiki.com/wiki/Device_Portal) - See also Surface Device Portal Plugin Deployment on this wiki

WDS

Windows Devices and Services (retired org name) - A retired (obsolete) name for the Surface org.

WDS_DEPENDS

A link/keyword in VSO items shiproom/release mgmt/etc. use.

WDTF

Windows Device Testing Framework (https://docs.microsoft.com/en-us/windows-hardware/drivers/wdtf/) - "...enables you to create, manage, reuse, and extend device-centric, scenario-based automated tests." WDTF provides a framework to create, for example, tests for device drivers. WDTF functionality includes the ability to put a system into CS (or MS, Modern Standby.)

WEEE

Waste Electrical and Electronic Equipment

WER

Windows Error Reporting - Is a flexible event-based feedback infrastructure designed to gather information about the hardware and software problems that Windows can detect, and report the information to Microsoft, and provide users with any available solutions.

WF

Word Facing (Camera)

WFMC

WorkFlow Management Coalition

WFOS

Windows Factory OS (https://learn.microsoft.com/en-us/windows-hardware/manufacture/desktop/factoryos/?view=windows-11). It is also known as MTEOS in the past.

WHCK

Windows Hardware Certification Kit (https://developer.microsoft.com/en-us/windows/hardware/windows-hardware-lab-kit) - See also WHQL, WLK, HLK, HCK. Not to be confused with WACK.

WHQL

Windows Hardware Quality Labs (http://en.wikipedia.org/wiki/WHQL_Testing) - See also WHCK, WLK, HLK, HCK.

WI

Corrected White Image

Wi-Fi

Wireless Fidelity

WinPE

Windows Preinstallation Environment - a minimum OS used to flash a new image on a Jupiter, for example (seen during flashing a new image using a USB drive)

WinRE

Windows Recovery

WITs

Work Item Types - A WIT is the object you use to track different types of work (https://docs.microsoft.com/en-us/azure/devops/boards/backlogs/add-work-items?view=azure-devops&tabs=browser)

WLAN

Wireless Local Area Network

WLK

Windows Logo Kit (https://surface/SW%20Wiki/WLK%20Tests.aspx) - See also WHCK, HLK, HCK

WLC

Wireless Charging - See https://deviceswiki.com/wiki/MCU_WLC_Subsystem

WMI

Windows Management Instrumentation (https://en.wikipedia.org/wiki/Windows_Management_Instrumentation) - See also CIM; Windows provides info about components via WMI; WMI info can be obtained (for example) via PowerShell

WOL

Wake On Lan - Wake on LAN Not Working in Windows 10 on Microsoft.com (https://answers.microsoft.com/en-us/windows/forum/windows_10-networking-winpc/wake-on-lan-not-working-in-windows-10/69057c2e-ad8d-41f0-9c12-e30675828dc2?auth=1)

WoT

Wake on Touch - A user can return to her Surface Pro and tap the screen or swipe up to ause the device to resume from lower-power "screen off" state. The Wake on Touch (WoT) feature is only supported on capable systems (e.g. WoT feature only works with touch effectors.) see also VVTool#WakeOnTouch

WOV

Wake on Voice - A device can use a lower-power Audio DSP to listen for "Hey, Cortana..." or "Hey, Alexa..." and then signal the main CPU to wake and process the full request.

WPA

Wi-Fi Protected Access

WPA2

Wi-Fi Protected Access 2 (based on 802.11i)

WPD

Windows Portable Devices https://msdn.microsoft.com/en-us/library/windows/desktop/dd388998(v=vs.85).aspx

WPT

Windows Performance Toolkit (https://docs.microsoft.com/en-us/windows-hardware/test/wpt/) - performance monitoring tools including Windows Performance Recorder (WPR) and Windows Performance Analyzer (WPA).

WSA

Windows Subsystem for Android

WSSI

Windows Silicon & System Integration (https://www.osgwiki.com/wiki/WSSI-Wiki)

WTMF

Windows Thermal Management Framework (https://docs.microsoft.com/en-us/windows-hardware/design/device-experiences/thermal-management-in-windows) - An approach to managing heat that is independent of other proprietary approaches like Intel's DPTF.

WU

Windows Update. A Windows service which automatically delivers software updates to a PC.

WUTPER

Windows Update Test Pass Exit Review.

WWCS

Worldwide Credit Services

X

XDK

Xbox Development Kit

XDM

fleXible Design and Manufacturing

Refers to a development/manufacturing model where the ODM (Offshore/Outsourced Development Model) is used, sometimes combining multiple other models to create and release a final product. An example of this was Surface Go and Surface Studio 2

External Design and Manufacturing

xDM

X (fill-in-the-blank) Development Model

(MTE) Refers to multiple development/manufacturing and partnering models. Generic acronym for various development/manfucturing models where X is a fill-in-the-blank indicator for the type of Development Model

(MTE) X represents a wildcard letter representing the type of Development Model. See also CM BDM ODM

XDP

eXtended Debug Port (Intel) - A connector providing ITP access for Intel CPUs. See ITP.

xHCI

eXtensible Host Controller Interface (https://en.wikipedia.org/wiki/Extensible_Host_Controller_Interface) - :"...host controller for Universal Serial Bus (USB)..."

XP

Cross Platform - E.g. There are many XP teams in Surface - drivers, uefi, thermal, media, touch&pen, ...

XPD

Cross-Polar Discrimiation of the antenna

XPR

Cross-Plarization ratio of the channel

Y

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Yellow

When used in reference to a project: There is an issue or risk without a mitigation plan that is putting the success of the project at risk

OR

The is a high number of significant issues putting a critical path item of the project at risk

Yield

Yield defines the output of a process relative to the input, and can be viewed in various specific contexts. See Manufacturing Yield.

YOHOJ

"You Only Had One Job" used in ODT bugs

Z

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ZBB

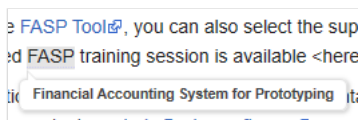Zero Bug Bounce - Key Software development milestone

ZDP

Zero Day Package

Name for the drop of the OS from the Windows Team. ZDP2, ZDP3, ...

ZIF

Zero Insertion Force - snap down connector type

Instructions for editing or adding items to this page

Instructions on this page may not work with VisualEditor. You can use either VisualEditor or classic editing through wiki markup (wikitext) to edit most pages. The directions on this page, especially about what codes to type to produce formatting effects, are predominantly geared toward wikitext editing. For instructions on editing with VisualEditor, see Wikipedia VisualEditor/User guide.

The plain text FASP shows the popup. Note that if the Term is a link or a part of a link as seen above FASP, then the popup will not function.

What kinds of terms should be defined?

Terms that appear on this page will have definitions shown *throughout the entire wiki*. Anyone is welcome to add new terms, subject to these guidelines:

- Terms should be **specific** (for example, "WTT Job Definition" instead of "Job")
- Terms should have **consistent** and **unambiguous** meaning across WDG
- Definitions should be **concise** (one or two sentences). If you need it to be longer, make a page about it and use link markup instead of a glossary entry.

How do I add a term?

You can use any characters in a term (including punctuation, spaces, all UTF-8 characters, but excluding the colon (:) of course), you are not limited to only letters.

To give some structure to the Terminology page you are also allowed to have Terms and Definitions on separate lines. Any lines not starting with a ; or a : are ignored, so go ahead and insert empty lines, headlines, explanatory text.

Using this format you may assign *one* definition to multiple terms, e.g. to cover grammatical variants (see the *U.S.A.* example below) and *multiple* definitions to one term, e.g. to cover different meanings (see the *ACK* example). You may even combine this, i.e. have multiple definitions for a set of multiple terms. Finally you may also use transclusion, e.g. to have different glossaries for different topics and pull them all together on the Terminology page.

```
;FTP
:File Transfer Protocol

;AAAAA
:American Association Against Acronym Abuse

;ACK
:Acknowledge
:Acklington railway station

;U.S.A.
;USA
:United States of America
```
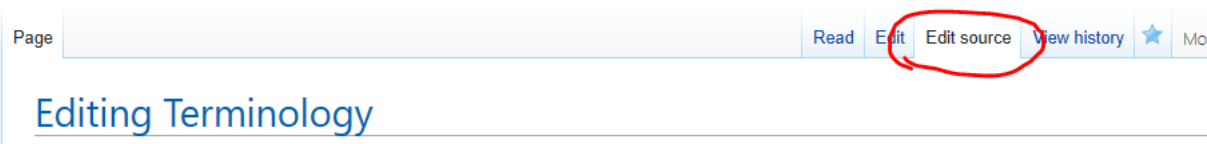
Tips for editing these terms.

> The ***It is not feasible to add new entries with the Visual Editor***. You must use the Edit Source view to add an item.

> We have had to intentionally Disable the edit links next to each Letter heading on this page. You must Click Edit source at the top and scroll to where you want to edit.

To add the item click on the Edit Source tab near the top of the page.

In this case I want to add WITs so I will scroll down to find my spot in the "W's". Hit enter so you create a new line.

Be sure to use the ";" in front of the term and ":" in front of your definition. To create the link, copy the URL from the browser and paste it in between the brackets. The add you text after a space it you want to show text.

You can go to the W's and view the new WITs item. Click Edit source and scroll down to the W's to view this item and see how to create a link to resource not on this Wiki.

See the Lingo usage documentation (https://www.mediawiki.org/wiki/Extension:Lingo#Usage).

Limitations

- Terms are always wiki-wide (cannot be restricted to a particular subset of pages)
- Terms are CaSe-SeNsItIvE
- Definitions cannot contain formatting