

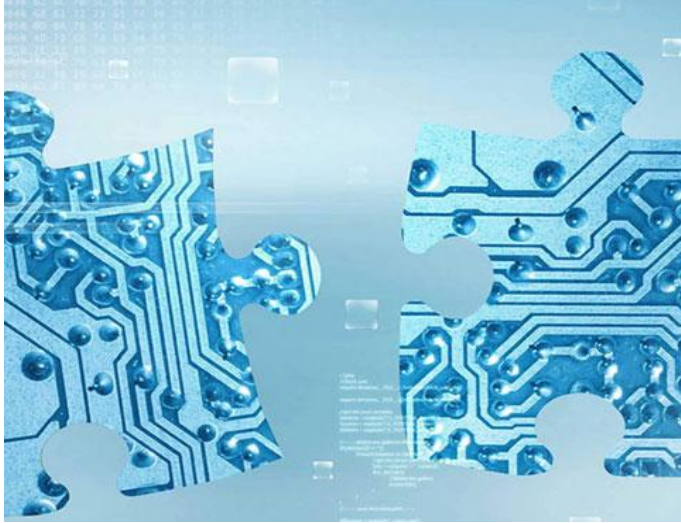


Our Technology Expertise for Software Engineering Services

AceThought Services – *Your Partner in Innovation*



High Performance Computing



MultiCore CPU

AceThought experts will re-design your sequential algorithms or applications to execute in parallel by exploiting domain decomposition (data parallelization), task decomposition (task parallelization) and pipelining (division of task into various stages).

We have designed and optimized software applications on Multicore CPU in the area of video compression, video decoder, video encoder and image processing.

GPGPU (CUDA, OPENCL, RENDERSRIPT)

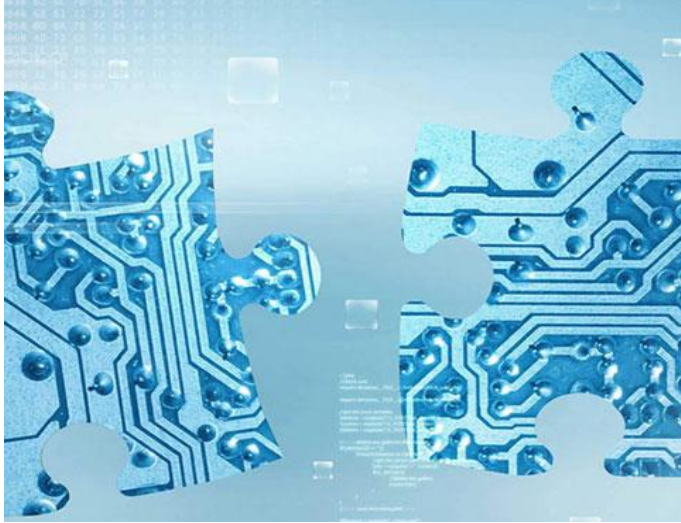
SIMD (x86, ARM, DSP)

OpenGL, OpenGL-ES, Direct3D





High Performance Computing



MultiCore CPU

GPGPU (CUDA, OPENCL, RENDERSRIPT)

AceThought has the expertise to accelerate your applications using Khronos OpenCL, Nvidia CUDA and Android Renderscript. We have accelerated applications for video compression, video stabilization and image processing.

AceThought stays at the forefront of GPU computing by constantly investing in upcoming technologies.

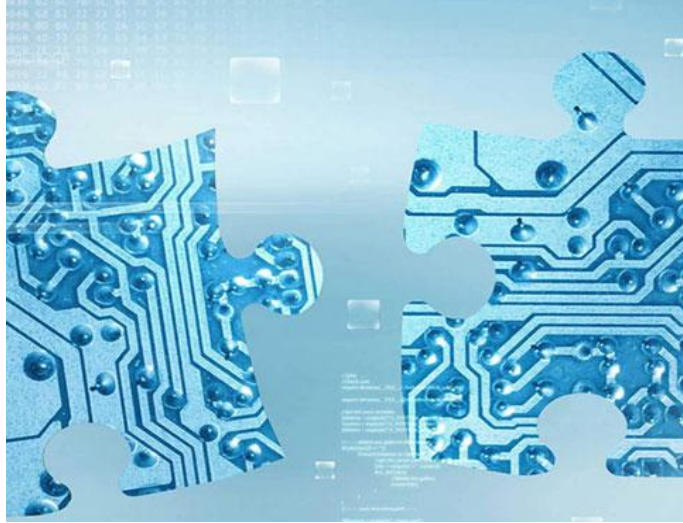
SIMD (x86, ARM, DSP)

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High Performance Computing



MultiCore CPU

GPGPU (CUDA, OPENCL, RENDERSRIPT)

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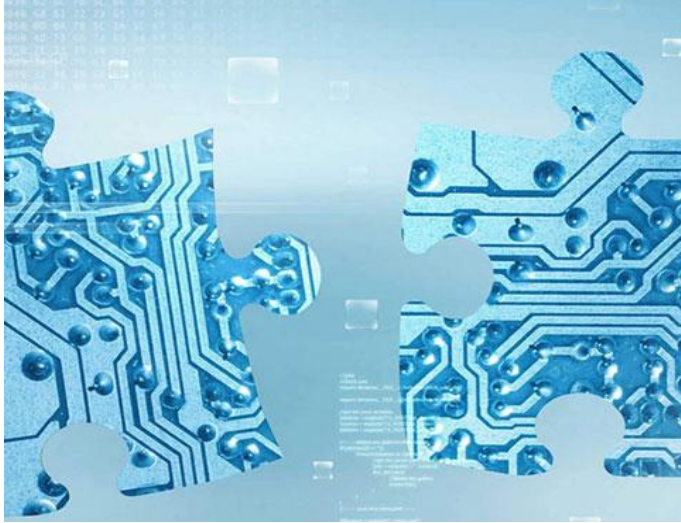
AceThought experts achieve maximum performance on CPU or DSP by using SIMD (Single Instruction Multiple Data) intrinsic and hand optimization of assembly code to take full advantage of underlying instruction set.

We have optimized x86 applications by using Streaming SIMD Extensions (SSE, SSE2, SSE3, SSSE3, SSE4) & Advanced Vector Extensions (AVX, AVX2, AVX-512); ARM applications by using NEON Instructions (ARMv7 - 32 bit, ARMv8 - 64 bit) and DSP (Superscalar, VLIW) applications.

OpenGL, OpenGL-ES, Direct3D



High Performance Computing



MultiCore CPU

GPGPU (CUDA, OPENCL, RENDERScript)

SIMD (x86, ARM, DSP)

OpenGL, OpenGL-ES, Direct3D

AceThought experts have extensive experience in optimizing graphics, rendering, imaging and video applications using industry standard platforms including Khronos OpenGL, Khronos OpenGL ES and Microsoft Direct3D.

We have designed and optimized video rendering pipeline on Android & iOS by using OpenGL ES and on Windows 10 by using Direct3D. AceThought has developed shaders (Pixel, Vertex, HLSL) for image enhancement, de-interlacing and image processing.



Multimedia Software



Multimedia Middleware

AceThought has developed complex multimedia applications and multimedia components for various embedded platforms and operating systems across verticals such as Smartphone, Automotive, Video Surveillance, Video Conferencing and POS Solutions.

We have expertise in 3GPP, MP4, AVI, AFS, MOV, MKV File Formats; RTP, RTSP, RTMP, HLS, MPEG-DASH Streaming Protocols; DRM, Ultraviolet Protect Delivery Standards; and GStreamer, Stagefright, Mp4Box, Openmax, DirectShow, DirectX, DMO Multimedia Frameworks.

Multimedia Codecs

Multimedia Pre & Post Processing

Multimedia Player



Multimedia Software



Multimedia Middleware

Multimedia Codecs

We offer services in design, development and optimization of video decoder, video encoder, image decoder, image encoder and audio codecs on range of mobile, desktop and embedded processors.

We have designed and optimized HEVC (H.265), VP9, H.264 (AVC), VC-1, VP8, MPEG-4 & MPEG-2 video codecs; JPEG, BMP & PNG image codecs and MP3, AAC & Ogg-Vorbis audio.

Multimedia Pre & Post Processing

Multimedia Player



Multimedia Software



Multimedia Middleware

Multimedia Codecs

Multimedia Pre & Post Processing

Video & Image pre & post-processing algorithms are designed to enhance the perceptual quality of compressed video & image. AceThought has designed pre & post algorithms such as Color space conversion, De-interlacing, De-noising, Resolution Scaling, Video Stabilization and White balancing on ARM, DSP, GPU, OpenGL and Direct3D.

AceThought has designed Audio pre & post processing algorithms to enhance the quality of audio & speech in several applications.

Multimedia Player



Multimedia Software



Multimedia Middleware

Multimedia Codecs

Multimedia Pre & Post Processing

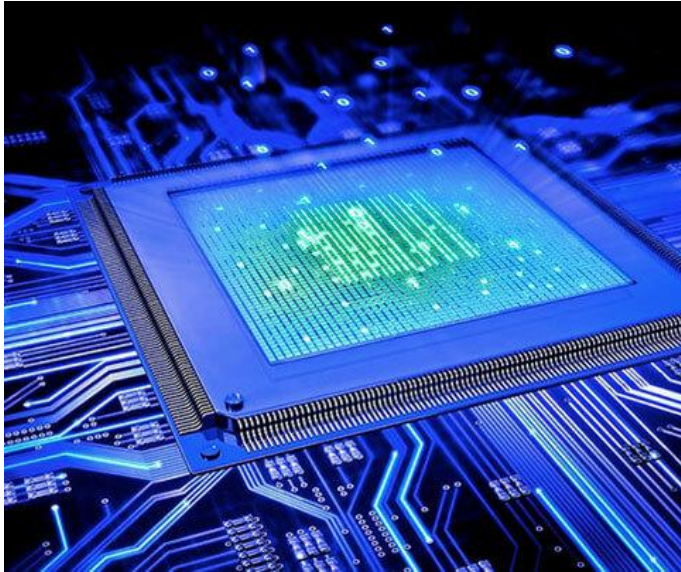
Multimedia Player

AceThought has deep expertise in developing streaming media player solutions. We have developed streaming media player applications on Android, iOS, Linux, Embedded Linux & Windows for several clients. We have designed media player using frameworks such as GStreamer, Stagefright, Mp4Box, Openmax, DirectShow & ffmpeg.





Embedded Software



Applications

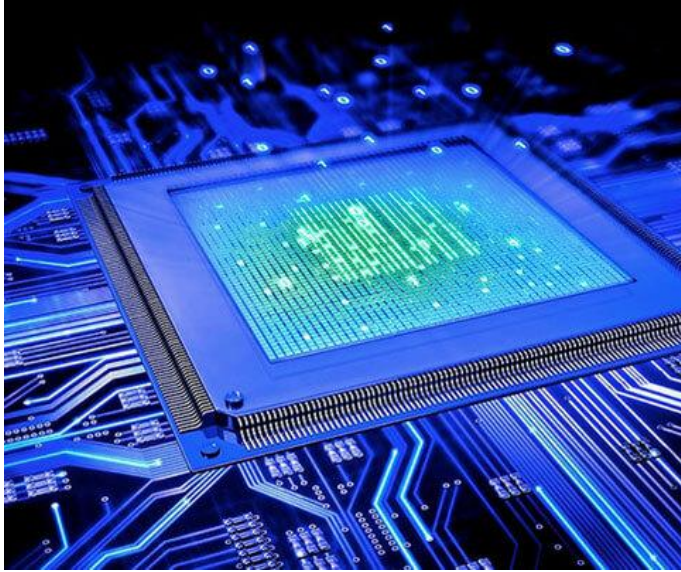
AceThought has expertise in developing safety-critical embedded software for Medical Devices, Automotive Electronics, Multimedia Devices and POS Systems. We use our expertise in embedded C, C++, ASM, ARM, DSP, QT and Multimedia Frameworks to swiftly develop embedded middleware, rich applications and interactive GUI for electronic products. Our embedded software team is equipped with competencies in a range of programming tools, microprocessors and real-time operating systems. We have worked with wide variety of EVM including Beagle Board, Panda Board, AM437x EVM and Freescale ARM Sabre Board.

DSP Software





Embedded Software



Applications

DSP Software

AceThought specializes in custom DSP software development for range of technologies including video codecs, imaging codecs, audio codecs, image processing, fixed point algorithms, audio processing, video stabilization, vision algorithms and multimedia applications. AceThought has designed Temporal Noise Filtering, Blur Removal, Flickering Detection and Removal, Video Stabilization & White Balancing Imaging Algorithms; MP3 & AAC Audio Codecs; HEVC, H.264, MPEG-4, VP9, VP8, VC-1 & MPEG-2 Video Codecs; and Color space conversion, De-interlacing, De-noising & Resolution Scaling Video Processing Algorithms.





Mobile Applications



Android

AceThought experts have complete understanding of Android SDK and Android NDK. We offer android application development services using C, C++, Java and ASM languages. We have extensive knowledge of Android SDK, Android NDK, App Manifest, User Interface, Animation and Graphics, Media and Camera, Location and Sensors, Connectivity, Data Storage, EGL, OpenGL ES, OpenSL ES, OpenMAX AL, Stagefright, ExoPlayer, Web Apps, Audio, Video, Vulkan and Renderscript technologies and APIs.

We have extensively worked with Streaming Media Apps, Navigation Apps, Augmented Reality Apps, Video/Image Processing Apps, Connected Apps and OpenGL & GPU Apps.

iOS (iPhone, iPad)

Windows 10 (Mobile, Tablet, UWP)



Mobile Applications



Android

iOS (iPhone, iPad)

AceThought has deep expertise in offering IOS (iPhone, iPad) application development services using Objective-C, Objective-C++, C, C++, ASM, OpenGL and Metal language. We have in-depth understanding of Cocoa Touch, Core OS, Media, Core Services, Webkit, Audio & Video, Data Management, Graphics & Animation, Networking & Internet, Swift, Core Audio, Core Video, Video Toolbox, Audio Toolbox, GLKit, OpenGL ES and Metal technologies and APIs.

We have extensively worked with Streaming Media Apps, Navigation Apps, Augmented Reality Apps, Video/Image Processing Apps, Connected Apps and OpenGL Apps.

Windows 10 (Mobile, Tablet, UWP)



Mobile Applications



Android

iOS (iPhone, iPad)

Windows 10 (Mobile, Tablet, UWP)

AceThought has rich expertise in offering Windows 10 Phone application development services and solutions using C, C++, C# and xml language. We have extensive knowledge of .NET, Location, Sensors, SMS, UPnP, Graphics, Direct3D 11, DXGI, Core audio, Media Playback, Media Foundation, WASAPI, Networking, Security, Storage, Thread pool, Threads, UI, Microsoft Store Engagement and Monetization APIs and technologies.

We have extensively worked with Streaming Media Apps, Navigation Apps, Augmented Reality Apps, Video/Image Processing Apps, Connected Apps and Direct3D Apps.



Desktop Applications



Windows (Win32, UWP)

AceThought has extensive experience developing Microsoft Windows applications on various languages and technologies. We have in depth knowledge of Windows Runtime APIs used in desktop apps, Windows APIs (Win32 and COM) used in Windows 10 Store apps, Windows Runtime APIs for Windows 10 Store apps and .NET APIs.

We provide Windows development services in custom software, user interface, web services, media applications, video/image/audio processing, networking applications and computer vision applications.

MAC OS X

Linux



Desktop Applications



Windows (Win32, UWP)

MAC OS X

AceThought has developed deep expertise into Mac OS X technologies. Our team has rich experience in working with Cocoa Framework and Objective-C. We provide Mac OS X development services in custom software, user interface, web services, media applications, video/image/audio processing, networking applications and computer vision applications.

Linux





Desktop Applications



Windows (Win32, UWP)

MAC OS X

Linux

AceThought experts provide exceptional application development services on Linux operating system. Our team is adept at using various technologies for Linux application development including Qt framework, Gstreamer, ffmpeg, x264, x265, Mp4Box, VLC, OpenGL, MySQL, Apache, C, C++, JAVA, PHP, Python and Perl.

AceThought has developed media player, media transcoding and hosted applications on Linux.



Contact Us

Thank You

for showing interest you may reach us at :

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