

Cloud OS - Operating Systems -- Claim

Henry V. Pham

The purpose of the 'Cloud OS – Operating Systems' invention is intended to replace the existing Operating Systems with the new World of Computing Infrastructure Modern of Cloud OS with Neighbor-to-Neighbor networking/routing technology where the servers machines connecting and routing directly without the routers or 3rd party routing devices to prevent hacking via Internet, Wire or Wireless connections with the 4K Number Encryption for all communication services. Cloud OS is the Number One importance to secure everything else. The Cloud OS which operates at the datacenter would provide the clients with the virtual Cloud OS that would run on client devices with provided secured connections and secured logon with 2 or more passwords for strong authentication. The client devices would be authenticated and communicated with the Cloud OS Datacenter to load and run the virtual Cloud OS without installing locally on user devices and not saving the user passwords. When the device is lost, the user can use a new device to login, and the desktop, applications and user data would be shown same without worry of losing data and without requiring IT or computer repair services. The datacenter would come with the new Cloud OS servers machines with 7 Ethernet connection ports and 2 hardware linker ports which would provide network connecting in star-tree topology 1-to-5 computer nodes and 1 reserved for shortcut connection with additional 2 ports for hardware linkers. This invention claim shows the overview figure of this invention which was submitted on 2021/10/02 with U.S. PCT/US21/71689 and International PCT/IB2021/000683 Patent Numbers, which can be used as the representing invention drawing to print on the patent frame and the following functions and features of this invention.

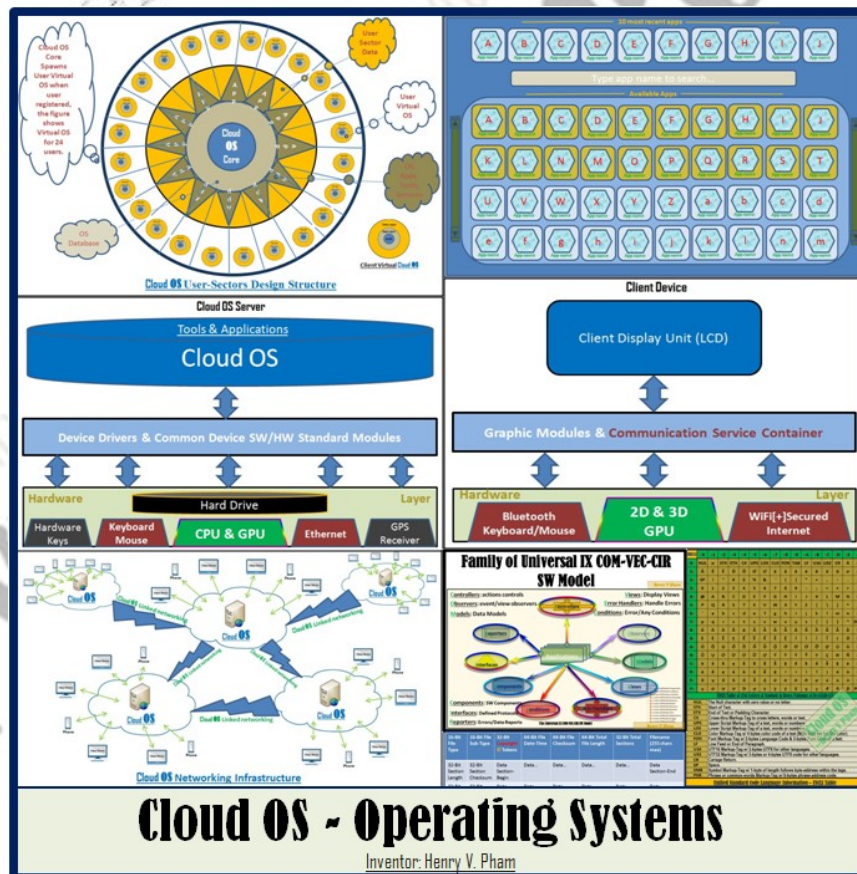


Figure-A: Cloud OS – Operating Systems -- Overview

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1. The main apparatus for the Cloud OS, comprising:

The Cloud OS which operates at the datacenter would provide secured data, email, text message across the world and the clients with the virtual Cloud OS with high secured communication via secured services with Dynamic Protocols that running on their services container; authentication services, communication services would be dynamically configured with different 4K Number Encryption each time within their service containers to serve the user devices; the Cloud OS details are shown on the website www.TheCloudOSCompany.com; the Cloud OS would be secured for military usage for communications and web services under military domain. Wherein, Cloud OS would provide secured Cloud OS Network at datacenter with at least 3 backup data locations for each user; the user devices would connect and communicate with their Cloud OS at datacenter to login and access their data; the Cloud OS would provide Application Services Container that host applications on user devices, and the users data would be stored and synchronized to their accounts at the datacenter; Cloud OS would support common standard applications such as Language Writer, Language Reader, Grid Data Analyzer, Design Planner and more, and the 3rd party applications can be built by the developers and deployed to the Apps Rooms for other users to search, set and enable to use while 3rd party applications can be returned if the users are unhappy. Cloud OS would provide the same version across the entire world and prevent applications with mismatched versions which cause not able to open from one user to another.

2. The main functions operating apparatus for the Cloud OS, comprising:

The Cloud OS would come with the true Single-Sign-on with 2-Factor Authentication with sign-in notifications to mobile devices to protect data, email, text message, home video recording files and other services accounts that no one else other than your sign-on can view. Cloud OS would provide standalone applications for both user data applications and web applications for secured data, prevent cookies, malware, spyware and hacking; and each Web App would be implemented to display its own website links for more organize browsing websites instead of having all searched websites links in one web browsers. Cloud OS would provide Upload Function to upload and convert the data from existing computers, and provide 3D Spiral Datalen Search Engine across the networks and could be used for programmers to develop with data searching requirements. Cloud OS would provide great secured feature for User Data traveled with the travelers for faster access and rollback to their local datacenter when the travelers come back to their hometown; note that there are many datacenters around the world. Wherein, all the data would be saved and secured at Datacenter with protection of the Cloud OS, and the users can use their devices to login to their Cloud OS accounts to use with history statistic logins window for checking their last logins. Email attached files would be sent as the links to recipient not the actual files to save storage spaces across the world. Language Writer would provide writing and editing documents and exporting to read-only documents; Language Reader would provide advanced features reading seal as read-only like PDF documents; Grid Data Analyzer would provide data points collections to analyze, graph and calculate; Presentation Planer would provide drawing, designing and planning functions for works.

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3. The main features supporting apparatus for the Cloud OS, comprising:

The Cloud OS would provide nice UI Desktop layout with User Friendly interfaces, secured Internet/Interweb, secured user data storage for documents and video recording files, secured email services, buy-and-returnable 3rd party applications, data inheritance and much more. Wherein, Cloud OS would provide true Single Sign-on and one user per account which are secured and useful for the user to have full control of their own account without having to have additional passwords authentication which would be replaced with the 4K Unique Account Number for other service accounts such as Email, Social Media, etc... Cloud OS would support copyright protection with user defined copyright tokens with the plus feature of clock synchronization across the world and every user would have the same clock ticks and the date/time cannot be changed. Cloud OS would provide common functions and same application versions across the world with Email would be stored in users account space, Shared box would be used to share data files with other users, and personal website right on their account. Cloud OS would support base 64 with Alpha Number and Bit Array for faster Data Shuffling and applying the Dual Mortars Data Exchanger Shuffler which was used in ZFilePackager zip application. Cloud OS would support great feature for user data inheritance with schedule-to-transfer to their love ones for the users who plan to retire or set within certain time of inactive login without worrying of losing data.

4. The networking apparatus for the Cloud OS, comprising:

The Cloud OS Datacenters would provide millions of server machines that connect together in spider web form in multi-layers with 1-to-5 star-tree topology network nodes that would form the hexacell networks and connect in the community networks with support of Cloud OS Network Synchronization to protect each other without routers or 3rd party routing devices. The Cloud OS network connections can be drawn at any network cell and link together which is very powerful and useful to manage and control the entire network remotely with Micromouse Network Count supports. Wherein, the Cloud OS Multi-layer Networks would use the Neighbor-to-Neighbor routing technology to find the shortest and fastest route to send data packages from one server machine to another, from one datacenter to another datacenter and from one user device to another user device through Cloud OS Datacenter across the world. The Neighbor-to-Neighbor routing technology was described in the 'G-ROUTING ALGORITHM METHODOLOGY' invention which was submitted on 2022/12/23 with U.S. PCT/US22/82347 and International PCT/IB2022/000800 Patent Numbers.

5. The Datacenter Cloud OS deploying apparatus for the Cloud OS, comprising:

The Cloud OS would be deployed securely to the datacenters from remotely. Wherein, the Cloud OS deploying OS updates would be chosen at a secured date time and series propagation deploying datacenters, and the users data and 3rd party applications would be deployed anytime as possible.

6. The Datacenter Cloud OS, Public Data and User Data storing apparatus for the Cloud OS, comprising:

The Cloud OS running on server machines at datacenter would serve public data with network memory as the network caching for faster accessing, and user data would be stored on user data account with their own manage and control; User's Email, Home Camera Recording Video and other data files would be stored on user account space at the datacenter with the Cloud OS 4K Number Encryption for each user; the users can have local backup option that can be downloaded to their local devices.

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7. The Datacenter secure functioning apparatus for the Cloud OS, comprising:

The Cloud OS server machines at the datacenter would come with Ethernet ports and no display ports, no keyboards, no mouse or other adapters for secured purposes, and the Ethernet ports would be used to connect servers together in the defined configured network cells. Wherein, the Cloud OS with secured Neighbor-to-Neighbors checking methodology would be applying Machine Learning for gAI or MI with e-Marshall to secure and protect datacenter from hackers for cyber security; the Cloud OS would be notified when a server is disconnected or malfunction at the datacenter, and the other Cloud OS server machine would take over the duty of that server to continue providing the services with dynamic network configurations of the network guard community servers.

8. The client device secured functioning apparatus for the Cloud OS, comprising:

The client devices would be provided with virtual Cloud OS with dynamic protocols for each services within the service containers. Wherein, the user data would be encrypted with the 4K Number Encryption and stored at the datacenter; the users have to enter correct passwords to login to their Cloud OS accounts, and the passwords would be transformed into the 4K Number for high secured encryption with dynamic protocol for authentication services; the users devices would be secured within their own accounts with the unique Machine Number which would be generated by the Cloud OS; when new or unknown device is logging into the user Cloud OS account, the user would be notified and the device is required more security questions and authentications.

9. The client device optimization downloading and configuring apparatus for the Cloud OS, comprising:

The client devices would be more optimized for downloading and configuring on demand to support adapters and peripheral devices per user for connected devices unlike the existing computers which come with operating system with all preloaded drivers. Wherein, when the client device is first login and connected, the Cloud OS would only handle the drivers for the connected devices for the user; the Cloud OS would only download and configure the required software for the user on demand and only support one user per account which would require less memory on user devices compare to the existing computers.

10. The Datacenter and client devices connecting and communicating apparatus for the Cloud OS, comprising:

The client devices would connect to the datacenter via WiFi routers or Wireless Base Hostspot though Internet/Interweb or mobile phone service towers to the satellites to reach the datacenter with suggesting with World Atomic Clock Towers installing on each datacenter for atomic clock synchronization easier and more accurate. Wherein, Starlink or Satellite network would provide the data links from one datacenter to another to transmit data packages for users around the world; Cloud OS Engate Service Container would be provided on the client devices for initial communication, and client device would authenticate by Cloud OS Engate Service to enter the Cloud OS world communicate to the Datacenter. The WiFi routers or Wireless Base Hostspot would be used to transmit data to or from the user devices to Internet/Interweb services towers which would be secured to protect data through the center; the "New Way to Protect WiFi Network from Hacker" invention with short name "WiFi[+]Secured" would be used to protect user's local home network, which was first submitted on 2021/07/01 with U.S.

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Only Patent Number 29/788,607; and then re-submitted on 2024/02/27 with U.S. PCT/US24/17533 and International PCT/IB2024/000110 Patent Numbers.

11. The 3rd party and users applications operating apparatus for the Cloud OS, comprising:

The Cloud OS would provide Build Room and Apps Room for the developers to build and deploy their applications, and the users can search apps from the Apps Room and enable to use within their accounts. Wherein, the 3rd party apps would be built by the developers as the owner with the Build Certificate to deploy for public use; Cloud OS with great strong and secured infrastructure, would provide buying apps from Apps Room with returnable function with developers buying license agreements; Cloud OS would also provide Apps Ratings features for the users to search and choose the best matched apps to use. The applications would generate data on their preset folders for data files organizing and secured purposes, and the users can browse to save and manage data files manually.

12. The Unified Programming Language supporting apparatus for the Cloud OS, comprising:

The Cloud OS would come with the new Unified Common Object Oriented Programming (UCOOP) Language to support globally as the common programming language for entire world. Wherein, the new UCOOP Programming Language which would be derived from Java to have more advanced Object Oriented Programming with new Cell Grid layout for GUI, configurable Retry Logic code for try/catch blocks, i18n support on-the-fly while using the apps with automatic or select language to translate the UI apps labels, apps buttons and apps wordings. The i18n support on-the-fly would help the SW developers focus on their own language, and Cloud OS would help the users to choose the language to translate to display the text of the applications to the user desired language. The Cloud OS would provide IDE Coder application for all Cloud OS users can develop their own applications within their own account before deploying for public use.

13. The UTF-8, Latin and other languages for Language Editor supporting apparatus for the Cloud OS, comprising:

Cloud OS would use the USCLI Table for documenting easier for all languages, which was designed to cover Latin Languages including English from the traditional ASCII Table which supports only English in standard characters. Wherein, USCLI Table as shown in the Reference-1 figure on the last page, supports all Latin Languages include English with markup tags to define Language code, Font code, Public Image/Icon address for common icons and Public Phrase address for common poems or phrases to display in different languages; USCLI Table would be great for documenting with easy history revision documents comparison functions for all languages with UTF-8 supports, and Cloud OS would provide File Revisions Control application for history revisions comparison for personal and team source code control purposes.

14. The good AI (gAI) and Machine Learning/Machine Intelligent (ML/MI) apparatus for the Cloud OS, comprising:

The Cloud OS would provide good AI (gAI) that applies machine learning to help users daily activities easier, secure and protect data at datacenters across the world and through user devices. Wherein, the gAI would be provided with Machine Learning features to help the users login with handwriting recognition, search the web, remind regular activities and much more; Cloud OS would use gAI to help

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user protecting their passwords or sensitive info with on-screen keyboard or Matrix Base Keyboard which would be used to prevent keystrokes logging; the gAI would provide handwriting recognition easier since Cloud OS naturally supports one user per account; Cloud OS would use Machine Intelligent for web security which applying Neighbor-to-Neighbor checking methodology to prevent hacking for security and user devices protection purposes.

15. The gAI Coding Helper functioning apparatus for the Cloud OS, comprising:

The Cloud OS would provide gAI Coding Helper for programmers with to generate coding templates with common coding functions easier and faster. Wherein, the gAI Coding Helper would use the UIX SW Model which was designed for Object Oriented Programming Software Architecture with the 9 software modeling circles which was posted on the website www.TheCloudOSCenter.com and as shown in the Reference-2 figure on the last page; this model would also works for Firmware and Hardware Architecture.

16. The user data secured storing apparatus for the Cloud OS, comprising:

The user data would store Cloud OS server machines in the secured hard drives into at least 3 different randomized locations in different datacenters, and the users can have an option to backup or store their data into their local memory storage devices. Wherein, the secured hard drives can be the Greatest Performance (GP) Hard Drive with the secured Dynamic Negotiate Communication Protocol, or other secured and reliable storage devices with Dynamic Communication Keys that set by Cloud OS and manage by the Cloud OS Community Server Machines which prevent unauthorized accessing into the Cloud OS data storage devices.

17. The user data secured downloading or exporting apparatus for the Cloud OS, comprising:

The Cloud OS would provide functions for the users to download and backup their data securely with the 4K Number Encryption plus applying Dynamic Protocol in file-based for Data Encryption Methodology which can only be opened by the account owner or can be set to give to certain individual. Wherein, Cloud OS would provide ZFilePackager zip application with the 4K Password that would work similar to the one already provided on the website www.TheCloudOSCenter.com. The secured zip application would zip and secure data with Randomly and Dynamically method that changing Encryption Keys Every Zipping Action; the users can zip and download their data into a local devices or external storage devices and no other users can able to open.

18. The user password resetting apparatus for the Cloud OS, comprising:

The Cloud OS would work with the Wireless/WiFi Base Hostspot which can be used for home or office to reset passwords when the users forgot their passwords. Wherein, the Wireless Base Hostspot which was mentioned on the website www.TheCloudOSCenter.com would provide the functions to accept security codes from the Cloud OS when the users request to reset their passwords; the Wireless Base Hostspot would be the home wireless device to host all the local wireless devices for home or office which would be used regularly by the users; the Wireless Base Hostspot for companies or organizations would be controlled by IT or Computer Security Team who can manage the users when they request to reset the passwords through Wireless Base Hostspot.

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19. The existing computer/laptop supporting apparatus for the Cloud OS, comprising:

The Cloud OS would support to use to existing computer or laptop to create Cloud OS account and login to use Cloud OS on the existing computers. Wherein, the Cloud OS would provide functions for the users to partitioning their existing computer to login and use Cloud OS while their data on the existing computer can be accessed and uploaded to their Cloud OS account.

20. The mobile devices supporting apparatus for the Cloud OS, comprising:

The Cloud OS would come with add-on mobile account for the users which can be used by the hybrid phones or mobile devices. Wherein, the hybrid mobile devices would be built with the basic supporting functions like phone-based functions for phones with Cloud OS Login support functions which can be used to login to the users Cloud OS mobile accounts; the Cloud OS mobile account would be built under the main Cloud OS account for each user, and the mobile account can be manage by the user with mobile apps would show on the mobile device; the hybrid mobile device would be used perfectly for 2-Factor authentication, and the users can build their own mobile apps.

21. The student and children accounts for schools and family controlling apparatus for the Cloud OS, comprising:

The Cloud OS would provide student and children accounts under the school domain account and parent account with schooling and parental controls respectively. Wherein, the schools can create student accounts under their domain umbrella account with school rights to manage and control with standard restriction rules for students; the parent can create children accounts under their account with parental rights to manage and control the children accounts with standard restriction rules for children; the schools staffs can communicate with the children and assign homework securely; the parent and the children can communicate with each other easily via their connecting devices; parent account is the independent account for personal use. The personal email, website and shared box formats would be <UserName>@<CityName>.mail, <UserName>@<CityName>.web and <UserName>@<CityName>.box respectively where city names would be provided on the list of major cities within the users country; and for school email and shared box formats would be under school domain.

22. The business or organization accounts operating and controlling apparatus for the Cloud OS, comprising:

The Cloud OS would provide domain account for businesses or organizations to create employees or workers accounts under their domain account. Wherein, the domain account manager would provide accounts with the initial passwords for their employees or workers to use and manage; the employees or workers can change their accounts passwords but to reset forgot passwords they have to go the IT or Computer Security Team with the Wireless Base Hostspot for passwords authentication reset code which was mentioned in claim-18; the employees or workers accounts would have shared boxes to share their works with their teams; and the domain email and shared box formats would be <UserName>@<Domain>.mail and <UserName>@<Domain>.box respectively.

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23. The Self-Manage, Self-Control and Self-Grow for future network expanding apparatus for the Cloud OS, comprising:

The Cloud OS with strong secured infrastructure with grow-able network cells that connecting together in multi-layers would provide the datacenters with network expandable with connect to expand network cell configuration that can be self-manage, self-control and self-grow. Wherein, the Cloud OS server machines would be connected in network cells without 3rd party routing devices which was mentioned in claim-4 to provide the network with easy to deploy and dynamic grow by applying Neighbor-to-Neighbors checking methodology and Neighbor-to-Neighbors routing technology; Cloud OS would have functions to check and draw for the connections and communications for every network cell of entire network at the datacenter for secured purposes; the Cloud OS would provide secured Internet or Interweb for entire world with strong secured datacenter with great future expandable network cells of the 3D networks or 3D eWeb.

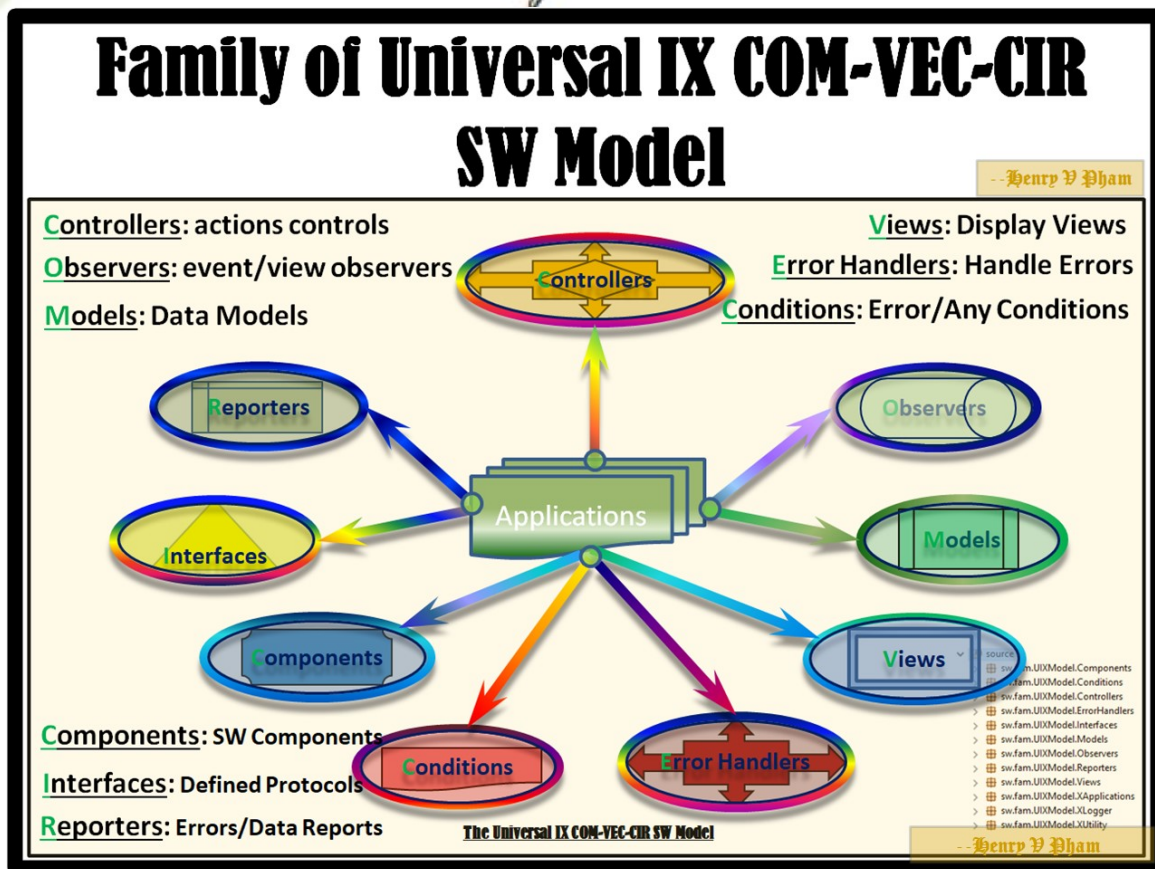
USCLI	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x	NUL	α	STX	ETX	CX	UPS	LOS	CLO	FON	TAB	LF	U16	U32	CR	Ã	Ã
1x	Â	Ê	Ë	Ö	Ô	Œ	Ů	ä	ä	ä	ë	ê	ö	ô	œ	ů
2x	SP	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3x	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4x	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5x	P	Q	R	S	T	S	V	W	X	Y	Z	[	\	]	^	_
6x	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7x	p	q	r	s	t	s	v	w	x	y	z	{		}	~	SMB
8x	Á	À	Ã	Ä	Å	Ä	Ä	Ä	Ä	Ä	Ä	Ä	Ä	Ä	Ä	É
9x	È	É	Ê	Ë	Ê	Ê	Ê	Ê	Ë	Í	Ì	Í	Î	Ï	Ó	Ò
Ax	Ó	Ô	Õ	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ö	Ú	Ù
Bx	Û	Ü	Û	Ü	Û	Ü	Ý	Ý	Ý	Ý	Ý	Ç	Đ	Ñ	á	
Cx	à	á	ä	å	ä	ä	ä	ä	ä	ä	ä	ä	ä	ä	é	è
Dx	é	ê	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë
Ex	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë	ë
Fx	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü

USCLI Table of 256 Letters & Symbols in Rows/Columns of [0-15]x[0-15]	
NUL	The Null character with zero value or no letter.
STX	Start of Text.
ETX	End of Text or Padding Character.
CX	Cross-thru Markup-Tag to cross letters, words or text.
UPS	Upper Script Markup-Tag of a text, words or numbers.
LOS	Lower Script Markup-Tag of a text, words or numbers.
CLO	Color Markup-Tag w/ 4 bytes color code of a text (MSb 0x80 set for BG color).
FON	Font Markup-Tag w/ 2-bytes Language Code & 3-bytes Font Code of a text.
LF	Line Feed or End of Paragraph.
U16	UTF16 Markup-Tag w/ 2-bytes UTF8 for other languages.
U32	UTF32 Markup-Tag w/ 3-bytes or 4-bytes UTF8 code for other languages.
CR	Cariage Return.
SP	Space.
SMB	Symbol Markup-Tag w/ 1-byte of length follows byte-address within the tags.
PHR	Phrase or common-words Markup-Tag w/ 8-bytes phrase-address code.

Reference-1: Unified Standard Code Language Information (USCLI) Table.

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Henry V. Pham



Reference-2: UIX Software Model.

Inventor name: Henry Viet Pham

Email Address: HenryVPham@Gmail.com; HenryVPham@TheCloudOSCenter.com

Business Website: www.TheCloudOSCompany.com

Phone Number: 714-686-0927