

Android S&P 500 Stock Quote Application Interface Control Document

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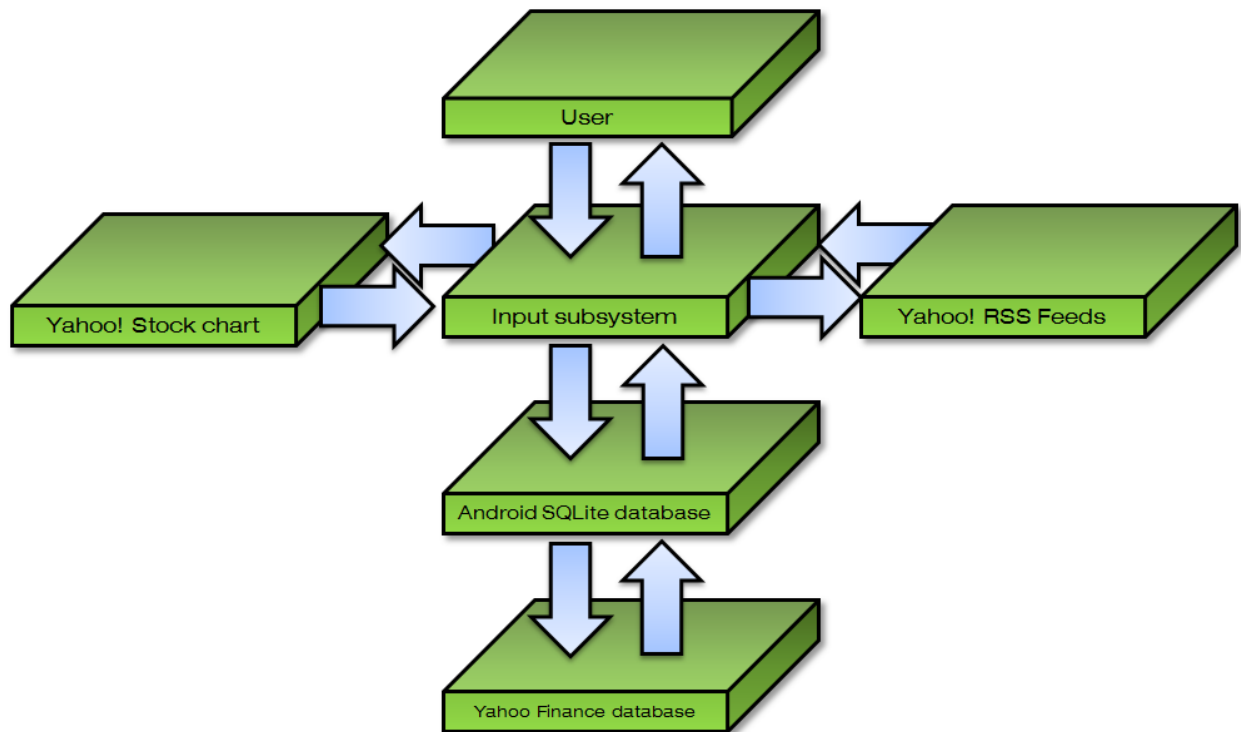


Document Change History

Version Number	Date	Contributor	Description
ICD-D-0.1	11/24/12	Mathew Yamasaki	Document creation
ICD-D-0.2	12/21/12	Mathew Yamasaki	Remove "Team C" logos
ICD-1.0	12/21/12	Mathew Yamasaki	Update all sections



1. Subsystem Diagram



1.2 Data between Input Subsystem and User

Name	Type	Value Range	Default Value
NAME_KEY	String	--	null
TICKER_KEY	String	--	null
CLOSING_PRICE_KEY	String	--	null
CHANGE_DOLLAR_KEY	String	--	null
DAILY_HIGH_KEY	String	--	null
DAILY_LOW_KEY	String	--	null
DAY_MA_KEY	String	--	null
RATIO_KEY	String	--	null
VOLUME_KEY	String	--	null
WEEK_HIGH_KEY	String	--	null
WEEK_LOW_KEY	String	--	null
CHANGE_PERCENT_KEY	String	--	null



1.3 Data between Input Subsystem and Yahoo! Stock Chart

Name	Type	Value Range	Default Value
Ticker	String	See Attachment 1	null
chartURL	String	"®ion=US&lang=en-US"	null
&t=6m	String (URL tag)	6 months	null
l	String (URL tag)	line chart	null
l	String (URL tag)	large chart size	null
&l=on	String (URL tag)	logarithmic chart scale	null
m50	String (URL tag)	50 days	50
m200	String (URL tag)	200 days	200

1.4 Data between Input Subsystem and Yahoo! RSS Feeds

Name	Type	Value Range	Default Value
Ticker	String	See Attachment 1	null
newsURL	String	"http://feeds.finance.yahoo.com/rss/2.0/headline?s="	null
language English	String	"®ion=US&lang=en-US"	null

1.5 Data between Yahoo! Finance Database and the Android SQLiteDatabase

Name	Type	Value Range	Default Value
s	String (URL tag)	See Attachment 1	null
n	String (URL tag)	See Attachment 1	null
l1	String (URL tag)	closing price	null
c1	String (URL tag)	daily dollar change	null
p2	String (URL tag)	daily percent change	null
k	String (URL tag)	52-week high	null
j	String (URL tag)	52-week low	null
h	String (URL tag)	day's high price	null
g	String (URL tag)	day's low price	null
r	String (URL tag)	P/E ratio	null
v	String (URL tag)	volume	null
m3	String (URL tag)	50-day moving average	null
ticker	String	--	null
closingPrice	double	0 – 64-bit 754 floating point	0.0
dollarChange	double	0 – 64-bit 754 floating point	0.0
percentChange	String	--	null
dailyHigh	double	0 – 64-bit 754 floating point	0.0
dailyLow	double	0 – 64-bit 754 floating point	0.0



ANDROID S&P 500 STOCK QUOTE APPLICATION INTERFACE CONTROL DOCUMENT

week52High	double	0 – 64-bit 754 floating point	0.0
week52Low	double	0 – 64-bit 754 floating point	0.0
peRatio	double	0 – 64-bit 754 floating point	0.0
volume	int	0 – 2,147,483,647	0
movingAverage50Day	double	0 – 64-bit 754 floating point	0.0
name	String	--	null

Attachment 1

Company Name (NAME KEY, companyName, n, name)	Ticker Symbol (Ticker, TICKER KEY, ticker, s)
3M Co	MMM
ACE Limited	ACE
AES Corp	AES
AFLAC Inc	AFL
AGL Resources	GAS
AT&T Inc	T
Abbott Laboratories	ABT
Abercrombie & Fitch Company A	ANF
Accenture plc	ACN
Adobe Systems Inc	ADBE
Advanced Micro Devices	AMD
Aetna Inc	AET
Agilent Technologies Inc	A
Air Products & Chemicals Inc	APD
Airgas Inc	ARG
Akamai Technologies Inc	AKAM
Alcoa Inc	AA
Alexion Pharmaceuticals Inc	ALXN
Allegheny Technologies Inc	ATI
Allergan Inc	AGN
Allstate Corp	ALL
Altera Corp	ALTR
Altria Group Inc	MO
Amazon.com Inc	AMZN
Ameren Corp	AEE
American Electric Power	AEP
American Express Co	AXP
American Intl Group Inc	AIG
American Tower Corp A	AMT
Ameriprise Financial Inc	AMP
AmerisourceBergen Corp	ABC
Amgen Inc	AMGN
Amphenol Corp A	APH
Anadarko Petroleum Corp	APC
Analog Devices Inc	ADI
Aon plc	AON
Apache Corp	APA
Apartment Investment & Mgmt	AIV
Apollo Group Inc	APOL
Apple Inc.	AAPL
Applied Materials Inc	AMAT
Archer-Daniels-Midland Co	ADM



Assurant Inc	AIZ
AutoNation Inc	AN
AutoZone Inc	AZO
Autodesk Inc	ADSK
Automatic Data Processing	ADP
AvalonBay Communities Inc	AVB
Avery Dennison Corp	AVY
Avon Products	AVP
BB&T Corp	BBT
BMC Software Inc	BMC
Baker Hughes Inc	BHI
Ball Corp	BLL
Bank of America Corp	BAC
Bard, C.R. Inc	BCR
Baxter Intl Inc	BAX
Beam Inc	BEAM
Becton, Dickinson & Co	BDX
Bed Bath & Beyond Inc	BBBY
Bemis Co Inc	BMS
Berkshire Hathaway B	BRK/B
Best Buy Co Inc	BBY
Big Lots Inc	BIG
Biogen Idec Inc	BIIB
BlackRock Inc	BLK
Block H & R Inc	HRB
Boeing Co	BA
Borgwarner Inc	BWA
Boston Properties Inc	BXP
Boston Scientific Corp	BSX
Bristol-Myers Squibb	BMJ
Broadcom Corp A	BRCM
Brown-Forman Corp B	BF/B
CA Inc	CA
CBRE Group, Inc.	CBG
CBS Corp B	CBS
CF Industries Holdings	CF
CH Robinson Worldwide Inc	CHRW
CMS Energy Corp	CMS
CONSOL Energy Inc	CNX
CSX Corp	CSX
CVS Caremark Corp.	CVS
Cablevision Systems Co A	CVC
Cabot Oil & Gas A	COG
Cameron International Corp	CAM
Campbell Soup Co	CPB
Capital One Financial	COF
Cardinal Health Inc	CAH



CareFusion Corp.	CFN
Carmax Inc	KMX
Carnival Corp	CCL
Caterpillar Inc	CAT
Celgene Corp	CELG
Centerpoint Energy Inc	CNP
CenturyLink Inc	CTL
Cerner Corp	CERN
Chesapeake Energy Corp	CHK
Chevron Corp	CVX
Chicago Mercantile Exchange	CME
Chipotle Mexican Grill Inc.	CMG
Chubb Corp	CB
Cigna Corporation	CI
Cincinnati Financial Corp	CINF
Cintas Corp	CTAS
Cisco Systems Inc	CSCO
Citigroup Inc	C
Citrix Systems Inc	CTXS
Cliffs Natural Resources Inc	CLF
Clorox Co	CLX
Coach Inc	COH
Coca-Cola Co	KO
Coca-Cola Enterprises	CCE
Cognizant Tech Solutions Corp	CTSH
Colgate-Palmolive Co	CL
Comcast Corp	CMCSA
Comerica Inc (MI)	CMA
Computer Sciences	CSC
ConAgra Foods Inc	CAG
ConocoPhillips	COP
Consolidated Edison Inc	ED
Constellation Brands Inc A	STZ
Cooper Industries Plc	CBE
Corning Inc	GLW
Costco Wholesale Corp	COST
Coventry Health Care Inc	CVH
Covidien Plc	COV
Crown Castle Intl Corp	CCI
Cummins Inc	CMI
DIRECTV	DTV
DTE Energy Co	DTE
DaVita HealthCare Partners Inc	DVA
Danaher Corp	DHR
Darden Restaurants Inc	DRI
Dean Foods Co	DF
Deere & Co	DE



Dell Inc	DELL
Denbury Resources Inc	DNR
Dentsply Intl	XRAY
Devon Energy Corp	DVN
Diamond Offshore Drilling	DO
Discover Financial Services	DFS
Discovery Communications Inc	DISCA
Dollar Tree Inc	DLTR
Dominion Resources Inc	D
Donnelley, R.R. & Sons	RRD
Dover Corp	DOV
Dow Chemical	DOW
Dr Pepper Snapple Group	DPS
Duke Energy Corp	DUK
Dun & Bradstreet Corp	DNB
E*TRADE Financial Corp	ETFC
E. I. du Pont de Nemours and Company	DD
EMC Corp	EMC
EOG Resources	EOG
EQT Corporation	EQT
Eastman Chemical Co	EMN
Eaton Corp	ETN
Ecolab Inc	ECL
Edison Intl	EIX
Edwards Lifesciences Corp	EW
Electronic Arts	EA
Emerson Electric Co	EMR
Enesco PLC - CL A	ESV
Entergy Corp	ETR
Equifax Inc	EFX
Equity Residential	EQR
Estee Lauder Cos.	EL
Exelon Corp	EXC
Expedia	EXPE
Expeditors Intl of WA Inc	EXPD
Express Scripts Holding Co.	ESRX
Exxon Mobil Corp	XOM
F5 Networks Inc	FFIV
FLIR Systems Inc	FLIR
FMC Corp	FMC
FMC Technologies Inc	FTI
Family Dollar Stores Inc	FDO
Fastenal Co	FAST
FedEx Corp	FDX
Federated Investors Inc B	FII
Fidelity National Information	FIS
Fifth Third Bancorp (OH)	FITB



First Horizon National Corp	FHN
First Solar Inc	FSLR
FirstEnergy Corp	FE
Fiserv Inc	FISV
Flowserve Corp	FLS
Fluor Corp	FLR
Ford Motor Co	F
Forest Laboratories	FRX
Fossil Inc	FOSL
Franklin Resources Inc	BEN
Freeport McMoRan Copper & Gold	FCX
Frontier Communications Corp	FTR
GameStop Corp A	GME
Gannett Co Inc	GCI
Gap Inc	GPS
General Dynamics	GD
General Electric Co	GE
General Mills Inc	GIS
Genuine Parts Co	GPC
Genworth Financial Inc	GNW
Gilead Sciences Inc	GILD
Goldman Sachs Group Inc	GS
Goodyear Tire & Rubber Co	GT
Google Inc	GOOG
Grainger, W.W. Inc	GWW
HCP Inc	HCP
Halliburton Co	HAL
Harley-Davidson Inc	HOG
Harman Intl Industries Inc	HAR
Harris Corp	HRS
Hartford Finl Services Group	HIG
Hasbro Inc	HAS
Health Care REIT Inc	HCN
Heinz, H.J. Co	HNZ
Helmerich & Payne Inc	HP
Hershey Foods Corp	HSY
Hess Corp	HES
Hewlett-Packard Co	HPQ
Home Depot Inc	HD
Honeywell Intl Inc	HON
Hormel Foods Corp	HRL
Horton, D.R. Inc	DHI
Hospira, Inc	HSP
Host Hotels & Resorts Inc	HST
Hudson City Bancorp	HCBK
Humana Inc	HUM
Huntington Bancshares (OH)	HBAN



Illinois Tool Works Inc	ITW
Ingersoll-Rand Plc	IR
Integrys Energy Group Inc	TEG
Intel Corp	INTC
IntercontinentalExchange	ICE
Interpublic Group Cos	IPG
Intl Business Machines Corp	IBM
Intl Flavors & Fragrances	IFF
Intl Game Technology	IGT
Intl Paper Co	IP
Intuit Inc	INTU
Intuitive Surgical Inc	ISRG
Invesco Ltd	IVZ
Iron Mountain Inc	IRM
JDS Uniphase Corp	JDSU
JP Morgan Chase & Co	JPM
Jabil Circuit Inc	JBL
Jacobs Engineering Group Inc	JEC
Johnson & Johnson	JNJ
Johnson Controls Inc	JCI
Joy Global Inc	JOY
Juniper Networks Inc	JNPR
KLA-Tencor Corporation	KLAC
Kellogg Co	K
KeyCorp	KEY
Kimberly-Clark	KMB
Kimco Realty Corp	KIM
Kinder Morgan Inc	KMI
Kohl's Corp	KSS
Kraft Foods Group Inc.	KRFT
Kroger Co	KR
L-3 Communications Holdings	LLL
LSI Corporation	LSI
Lab Corp of America Hldgs	LH
Lam Research Corp	LRCX
Legg Mason Inc	LM
Leggett & Platt	LEG
Lennar Corp	LEN
Leucadia National Corp (NY)	LUK
Life Technologies Corp	LIFE
Lilly, Eli & Co	LLY
Limited Brands Inc	LTD
Lincoln National Corp	LNC
Linear Technology Corp	LLTC
Lockheed Martin	LMT
Loews Corp	L
Lorillard Inc	LO



Lowe's Cos Inc	LOW
LyondellBasell Industries N.V.	LYB
M&T Bank Corp	MTB
Macy's Inc	M
Marathon Oil Corp	MRO
Marathon Petroleum Corp.	MPC
Marriott Intl A	MAR
Marsh & McLennan Companies	MMC
Masco Corp	MAS
Mastercard Inc A	MA
Mattel Inc	MAT
McCormick & Co	MKC
McDonald's Corp	MCD
McGraw-Hill Cos Inc	MHP
McKesson Corp	MCK
Mead Johnson Nutrition Co	MJN
MeadWestvaco Corp	MWV
Medtronic Inc	MDT
Merck & Co Inc	MRK
Metlife Inc	MET
Metropcs Communications Inc	PCS
Microchip Technology Inc	MCHP
Micron Technology Inc	MU
Microsoft Corp	MSFT
Molex Inc	MOLX
Molson Coors Brewing Co B	TAP
Mondelez International Inc	MDLZ
Monsanto Co.	MON
Monster Beverage Corp	MNST
Moody's Corp	MCO
Morgan Stanley	MS
Mosaic Co	MOS
Motorola Solutions, Inc	MSI
Murphy Oil Corp	MUR
Mylan Inc.	MYL
NIKE Inc B	NKE
NRG Energy	NRG
NYSE Euronext	NYX
Nabors Industries Ltd	NBR
Nasdaq OMX Group/The	NDAQ
National Oilwell Varco Inc	NOV
NetApp Inc	NTAP
NetFlix Inc	NFLX
Newell Rubbermaid Inc	NWL
Newfield Exploration Co	NFX
Newmont Mining Corp	NEM
News Corporation	NWSA



NextEra Energy Inc	NEE
Nisource Inc	NI
Noble Corp	NE
Noble Energy Inc	NBL
Nordstrom Inc	JWN
Norfolk Southern Corp	NSC
Northeast Utilities	NU
Northern Trust Corp (IL)	NTRS
Northrop Grumman Corp	NOC
Nucor Corp	NUE
Nvidia Corp	NVDA
O'Reilly Automotive	ORLY
ONEOK Inc	OKE
Occidental Petroleum	OXY
Omnicom Group	OMC
Oracle Corp	ORCL
Owens-Illinois Inc	OI
PACCAR Inc	PCAR
PETsMART Inc	PETM
PG&E Corporation	PCG
PNC Finl Services Group	PNC
PPG Industries Inc	PPG
PPL Corp	PPL
Pall Corp	PLL
Parker-Hannifin Corp	PH
Patterson Cos Inc	PDCO
Paychex Inc	PAYX
Peabody Energy Corp	BTU
Penney, J.C. Inc	JCP
Pentair Ltd.	PNR
People's United Financial Inc	PBCT
Pepco Holdings Inc	POM
PepsiCo Inc	PEP
PerkinElmer Inc	PKI
Perrigo Co	PRGO
Pfizer Inc	PFE
Philip Morris International	PM
Phillips 66	PSX
Pinnacle West Capital (AZ)	PNW
Pioneer Natural Resources	PXD
Pitney Bowes Inc	PBI
Plum Creek Timber Co	PCL
Praxair Inc	PX
Precision Castparts Corp	PCP
Priceline.com Inc	PCLN
Principal Financial Group	PFG
ProLogis, Inc	PLD



Procter & Gamble	PG
Progressive Corp	PGR
Prudential Financial Inc	PRU
Public Service Enterprise Grp	PEG
Public Storage	PSA
Pulte Group Inc	PHM
QEP Resources	QEP
QUALCOMM Inc	QCOM
Quanta Services Inc	PWR
Quest Diagnostics	DGX
Ralph Lauren Corp	RL
Range Resources Corp	RRC
Raytheon Co	RTN
Red Hat Inc	RHT
Regions Financial Corp	RF
Republic Services Inc	RSG
Reynolds American Inc	RAI
Robert Half Intl Inc	RHI
Rockwell Automation Inc	ROK
Rockwell Collins	COL
Roper Industries Inc	ROP
Ross Stores Inc	ROST
Rowan Cos Plc	RDC
Ryder System Inc	R
SAIC Inc	SAI
SCANA Corp	SCG
SLM Corp	SLM
Safeway Inc	SWY
Salesforce.com	CRM
SanDisk Corp	SNDK
Schlumberger Ltd	SLB
Schwab, Charles Corp	SCHW
Scripps Networks Interactive	SNI
Seagate Technology	STX
Sealed Air Corp	SEE
Sempra Energy	SRE
Sherwin-Williams Co	SHW
Sigma-Aldrich Corp	SIAL
Simon Property Group	SPG
Smucker, J.M. Co	SJM
Snap On Inc	SNA
Southern Co	SO
Southwest Airlines Co	LUV
Southwestern Energy Co	SWN
Spectra Energy Corp	SE
Sprint Nextel Corp	S
St Jude Medical Inc	STJ



Stanley Black & Decker	SWK
Staples Inc	SPLS
Starbucks Corp	SBUX
Starwood Hotel & Resort World	HOT
State Street Corp	STT
Stericycle Inc	SRCL
Stryker Corp	SYK
SunTrust Banks Inc (GA)	STI
Symantec Corp	SYMC
Sysco Corp	SYT
T Rowe Price Group Inc	TROW
TE Connectivity Ltd.	TEL
TECO Energy Inc	TE
TJX Cos Inc	TJX
Target Corp	TGT
Tenet Healthcare	THC
Teradata Corp	TDC
Teradyne Inc	TER
Tesoro Corp	TSO
Texas Instruments Inc	TXN
Textron Inc	TXT
The ADT Corp.	ADT
The Bank of New York Mellon Corp	BK
The Williams Companies Inc	WMB
Thermo Fisher Scientific	TMO
Tiffany & Co	TIF
Time Warner Cable Inc	TWC
Time Warner Inc	TWX
Titanium Metals Corp	TIE
Torchmark Corp	TMK
Total System Services Inc	TSS
Travelers Cos Inc	TRV
TripAdvisor Inc.	TRIP
Tyco Intl	TYC
Tyson Foods Inc A	TSN
US Bancorp	USB
Union Pacific Corp	UNP
United Parcel Service Inc B	UPS
United States Steel Corp	X
United Technologies Corp	UTX
Unitedhealth Group Inc	UNH
Unum Group	UNM
Urban Outfitters	URBN
VF Corp	VFC
Valero Energy Corp	VLO
Varian Medical Systems Inc	VAR
Ventas Inc	VTR



VeriSign Inc	VRSN
Verizon Communications Inc	VZ
Viacom Inc B	VIAB
Visa Inc	V
Vornado Realty Trust	VNO
Vulcan Materials Co	VMC
WPX Energy Inc.	WPX
Wal-Mart Stores	WMT
Walgreen Co	WAG
Walt Disney Co	DIS
Washington Post Co B	WPO
Waste Management Inc	WM
Waters Corp	WAT
Watson Pharmaceuticals	WPI
WellPoint Inc	WLP
Wells Fargo & Co	WFC
Western Digital Corp	WDC
Western Union Co	WU
Weyerhaeuser Co	WY
Whirlpool Corp	WHR
Whole Foods Market Inc	WFM
Windstream Corp	WIN
Wisconsin Energy Corp	WEC
Wyndham Worldwide Corp	WYN
Wynn Resorts Ltd	WYNN
XL Group Plc	XL
Xcel Energy Inc	XEL
Xerox Corp	XRX
Xilinx Inc	XLNX
Xylem Inc	XYL
Yahoo Inc	YHOO
Yum! Brands Inc	YUM
Zimmer Holdings Inc	ZMH
Zions Bancorp (UT)	ZION
eBay Inc.	EBAY