Patent Number	Title	Applicant	Filed	Date of Patent
US 10,354,317	INVENTORY MANAGEMENT	IBM	07/10/2017	07/16/2019
US 10,366,444	INVENTORY MANAGEMENT	IBM	12/12/2017	07/30/2019
US 10,176,514	INTELLIGENT MANAGING STORE INVENTORY	IBM	02/26/2018	01/08/2019
US 9,519,620	IDENTIFYING SUBSTITUTE INGREDIENTS USING A NATURAL	IBM	01/29/2016	12/13/2016
	LANGUAGE PROCESSING SYSTEM			
US 9,971,737	IDENTIFYING SUBSTITUTE INGREDIENTS USING A NATURAL	IBM	06/30/2016	05/15/2018
	LANGUAGE PROCESSING SYSTEM			
US 10,754,886	USING MULTIPLE NATURAL LANGUAGE CLASSIFIER TO ASSOCIATE A	IBM	10/05/2016	08/25/2020
	GENERIC QUERY WITH A STRUCTURED QUESITON TYPE			
US 10,380,667	COLLABORATIVE DELIVERY DEVICE	IBM	06/07/2017	08/13/2019
US 10,545,030	LOCAL ADVERTISEMENT GENERATION AND DISPLAY BASED ON	IBM	11/08/2017	01/28/2020
	APPLICATIONS			
US 10,551,210	LOCAL ADVERTISEMENT GENERATION AND DISPLAY BASED ON	IBM	05/12/2017	02/04/2020
	APPLICATIONS			
US 7,619,525	METHOD AND SYSTEM FOR PROVIDING SECURITY USING RFID	IBM	07/26/2007	11/17/2009
	TAGGED ITEMS EXITING OR ENTERING A RETAIL ESTABLISHMENT			
US 8,682,808	METHOD AND APPARATUS FOR PROCESSING LOGISTIC	IBM	01/28/2011	03/25/2014
	INFORMATION			
US 10,207,803	PACKAGE DELIVERY AND RECEPTION WITH DRONES	IBM	10/12/2017	02/19/2019
US 10,526,088	PACKAGE DELIVERY AND RECEPTION WITH DRONES	IBM	11/30/2018	01/07/2020
US 9,926,078	PACKAGE DELIVERY AND RECEPTION WITH DRONES	IBM	11/04/2015	03/27/2018
US 10,664,788	AD-HOC PARCEL DELIVERY DROP ZONE AND HOTSPOT	IBM	01/30/2017	05/26/2020
US 8,494,910	METHOD, SYSTEM AND PROGRAM PRODUCT FOR SUPPORTING A	IBM	12/02/2002	07/23/2013
	TRANSACTION BETWEEN ELECTRONIC DEVICE USERS			
US 7,988,045	PORTABLE DEVICE-BASED SHOPPING CHECKOUT	IBM	05/31/2007	08/02/2011
US 10,421,434	DELEGATING CONTROL OF A VEHICLE	IBM	12/12/2017	09/24/2019
US 9,399,445	DELEGATING CONTROL OF A VEHICLE	IBM	05/08/2014	07/26/2016
US 9,884,611	DELEGATING CONTROL OF A VEHICLE	IBM	04/15/2016	02/06/2018
US 10,386,198	ADAPTIVE AUDIO GUIDANCE NAVIGATION	IBM	12/15/2017	08/20/2019
US 9,587,955	ADAPTIVE AUDIO GUIDANCE NAVIGATION	IBM	10/12/2015	03/07/2017
US 9,909,895	ADAPTIVE AUDIO GUIDANCE NAVIGATION	IBM	01/17/2017	03/06/2018

US 10,129,707	AUTOMATICALLY NAVIGATING A MOBILE DEVICE TO A PARTICULAR ELECTRONIC PAGE BASED ON A USER'S LOCATION WITHIN A VENUE	IBM	09/06/2017	11/13/2018
US 9,763,057	AUTOMATICALLY NAVIGATING A MOBILE DEVICE TO A PARTICULAR ELECTRONIC PAGE BASED ON A USER'S LOCATION WITHIN A VENUE	IBM	11/25/2015	09/12/2017
US 10,166,976	CONNECTION OF AN AUTONOMOUS VEHICLE WITH A SECOND VEHICLE TO RECEIVE GOODS	IBM	07/22/2016	01/01/2019
US 9,796,529	AUTONOMOUSE VEHICLE-BASED PACKAGE PICKUP AND TRANSFER	IBM	09/26/2016	10/24/2017
US 10,769,608	INTELLIGENT CHECKOUT MANAGEMENT SYSTEM	IBM	09/15/2016	09/08/2020
US 10,679,232	REAL-TIME PRODUCT SELECTION GUIDANCE FOR CONDITIONAL SALES	IBM	02/14/2017	06/09/2020
US 10,620,011	AUTONOMOUS VEHICLE ROUTING	IBM	11/10/2016	04/14/2020
US 10,298,587	PEER-TO-PEER AUGMENTED REALITY HANDLERS	IBM	06/20/2016	05/21/2019
US 9,442,958	PRODUCT IDENTIFICATION VIA IMAGE ANALYSIS	IBM	12/24/2014	09/13/2016
US 9,811,537	PRODUCT IDENTIFICATION VIA IMAGE ANALYSIS	IBM	05/17/2016	11/07/2017
US 8,458,090	DETECTING FRAUDULENT MOBILE MONEY TRANSACTIONS	IBM	04/18/2012	06/04/2013
US 8,719,025	CONTEXTUAL VOICE QUERY DILATION TO IMPROVE SPOKEN WEB SEARCHING	IBM	05/14/2012	05/06/2014
US 8,731,930	CONTEXTUAL VOICE QUERY DILATION TO IMPROVE SPOKEN WEB SEARCHING	IBM	08/08/2012	05/20/2-14
US 10,607,391	AUTOMATED VIRTUAL ARTIFACT GENERATION THROUGH NATURAL LANGUAGE PROCESSING	IBM	07/04/2018	03/31/2020
US 10,170,006	ROUTE PLANNING FOR MULTI-UNMANNED AERIAL VEHICLE-BASED PACKAGE DELIVERY	IBM	09/27/2016	01/01/2019
US 10,661,899	IN FLIGHT TRANSFER OF PACKAGES BETWEEN AERIAL DRONES	IBM	11/28/2017	05/26/2020
US 9,561,852	IN FLIGHT TRANSFER OF PACKAGES BETWEEN AERIAL DRONES	IBM	01/04/2016	02/07/2017
US 9,889,933	IN FLIGHT TRANSFER OF PACKAGES BETWEEN AERIAL DRONES	IBM	01/09/2017	02/13/2018
US 10,289,965	AUTONOMOUS VEHICLE SCHEDULLING SYTEM FOR PICKUP AND DROP-OFF OF PASSENGERS	IBM	11/30/2017	05/14/2019
US 9,911,084	AUTONOMOUS VEHICLE SCHEDULILNG SYSTEM FOR PICKUP AND DROP-OFF OF PASSENGERS	IBM	02/02/2016	03/06/2018
US 10,546,268	RECIPIENT CUSTOMIZED DELIVERY PATHS FOR UNMANNED AERIAL VEHICLE DELIVERIES	IBM	10/27/2016	01/28/2020

US 8,607,149	HIGHLIGHTING RELATED USER INTERFACE CONTROLS	IBM	03/23/2006	12/10/2013
US 7,299,125	IN-TRANSIT PACKAGE LOCATION TRACKING AND REPORTING	IBM	08/14/2004	11/20/2007
US 8,160,924	PAY-PER-CLICK FRAUD PROTECTION	IBM	10/6/2005	04/17/2012
US 10,007,917	PAY-PER-CLICK FRAUD PROTECTION	IBM	03/20/2012	06/26/2018
US 8,751,300	PIXEL CLUSTER TRANSIT MONITORING FOR DETECTING CLICK	IBM	06/22/2007	06/10/2014
	FRAUD			
US 8,938,395	CURSOR PATH VECTOR ANALYSIS FOR DETECTING CLICK FRAUD	IBM	06/16/2007	01/20/2015
US 8,719,088	PIXEL CLUSTER TRANSIT MONITORING FOR DETECTING CLICK	IBM	06/22/2007	05/06/2014
	FRAUD			
US 9,251,522	PIXEL CLUSTER TRANSIT MONITORING FOR DETECTING CLICK	IBM	06/22/2007	02/02/2016
	FRAUD			
US 9,460,452	PIXEL CLUSTER TRANSIT MONITORING FOR DETECTING CLICK	IBM	12/10/2015	10/04/2016
	FRAUD			
US 8,935,175	CURSOR PATH VECTOR ANALYSIS FOR DETECTING CLICK FRAUD	IBM	07/16/2007	01/13/2015
US 8,935,176	CURSOR PATH VECTOR ANALYSIS FOR DETECTING CLICK FRAUD	IBM	07/16/2007	01/13/2015
US 10,282,769	COLLABORATIVE CO-SHOPPING FOR E-COMMERCE	IBM	10/28/2014	05/07/2019
US 10,319,017	COLLABORATIVE CO-SHOPPING FOR E-COMMERCE	IBM	05/11/2015	06/11/2019
US 10,049,401	DYNAMICALLY OPTIMIZING INVENTORY PICKING PATH WITHIN A	IBM	11/30/2017	08/14/2018
	STORE			
US 9,665,899	DYNAMICALLY OPTIMIZING INVENTORY PICKING PATH WITHIN A	IBM	03/31/2016	05/30/2017
	STORE			
US 9,904,952	DYNAMICALLY OPTIMIZING INVENTORY PICKING PATH WITHIN A	IBM	03/29/2017	02/27/2018
	STORE			
US 9,734,182	INGREDIENT BASED NUTRITIONAL INFORMATION	IBM	03/31/2016	08/15/2017
US 9,574,888	ROUTE GENERATION BASED ON CONTEXTUAL RISK	IBM	01/29/2016	02/21/2017
US 8,199,966	SYSTEM AND METHOD FOR PROVIDING CONTEMPORANEOUS	IBM	05/14/2008	06/12/2012
	PRODUCT INFORMATION WITH ANIMATED VIRTUAL			
	<u>REPRESENTATIONS</u>			
US 8,370,490	CLOUD SERVICE COST-OPTIMAL DATA CENTER ASSIGNMENT	IBM	07/01/2010	02/05/2013
US 9,286,323	CONTEXT-AWARE TAGGING FOR AUGMENTED REALITY	IBM	02/25/2013	03/15/2016
	<u>ENVIRONMENTS</u>			
US 9,218,361	CONTEXT-AWARE TAGGING FOR AUGMENTED REALITY	IBM	08/19/2013	12/22/2015
	<u>ENVIRONMENTS</u>			

US 9,905,051	CONTEXT-AWARE TAGGING FOR AUGMENTED REALITY	IBM	12/31/2015	02/27/2018
	ENVIRONMENTS			
US 10,354,281	COMMUNICATING WITH A CUSTOMER TRAVELING ON A ROUTE TO	IBM	10/31/2014	07/16/2019
	<u>A LOCATION</u>			
US 10,354,282	COMMUNICATING WITH A CUSTOMER TRAVELING ON A ROUTE TO	IBM	06/18/2015	07/16/2019
	<u>A LOCATION</u>			
US 9,718,471	AUTOMATED SPATIAL SEPARATION OF SELF-DRIVING VEHICLES	IBM	08/18/2015	08/01/2017
	FROM MANUALLY OPERATED VEHICLES			
US 10,202,117	AUTOMATED SPATIAL SEPARATION OF SELF-DRIVING VEHICLES	IBM	11/09/2017	02/12/2019
	FROM OTHER VEHICLES BASED ON OCCUPANT PREFERENCES			
US 10,173,679	AUTOMATED SPATIAL SEPARATION OF SELF-DRIVING VEHICLES	IBM	11/09/2017	01/08/2019
	FROM OTHER VEHICLES BASED ON OCCUPANT PREFERENCES			
US 9,896,100	AUTOMATED SPATIAL SEPARATION OF SELF-DRIVING VEHICLES	IBM	08/24/2015	02/20/2018
	FROM OTHER VEHICLES BASED ON OCCUPANT PREFERENCES			
US 9,981,669	CONTROLLING DRIVING MODES OF SELF-DRIVING VEHICLES	IBM	10/23/2017	05/29/2018
US 9,834,224	CONTROLLING DRIVING MODES OF SELF-DRIVING VEHICLES	IBM	10/15/2015	12/05/2017
US 10,543,844	CONTROLLING DRIVING MODES OF SELF-DRIVING VEHICLES	IBM	12/12/2017	01/28/2020
US 9,944,291	CONTROLLING DRIVING MODES OF SELF-DRIVING VEHICLES	IBM	10/27/2015	04/17/2018
US 9,749,268	SYSTEM AND METHOD FOR MESSAGE DELIVERY	IBM	12/08/2015	08/29/2017
US 9,702,714	ROUTING OF VEHICLE FOR HIRE TO DYNAMIC PICKUP LOCATION	IBM	12/03/2015	07/11/2017
US 9,919,704	PARKING FOR SELF-DRIVING CAR	IBM	01/27/2017	03/20/2018
US 10,363,893	SELF-DRIVING VEHICLE CONTEXTUAL LOCK CONTROL SYSTEM	IBM	01/05/2017	07/30/2019
US 10,580,305	AUTONOMOUS PRESENTATION OF A SELF-DRIVING VEHICLE	IBM	12/11/2017	03/03/2020
US 10,453,345	AUTONOMOUS PRESENTATION OF A SELF-DRIVING VEHICLE	IBM	01/30/2017	10/22/2019
US 10,593,216	METHODS AND SYSTEMS FOR MULTIPLE DRONE DELIVERY SYSTEM	IBM	03/22/2017	03/17/2020
	WITH IN-FLIGHT HANDOFF			
US 10,538,239	ADAPTING DRIVING BASED ON A TRANSPORTED CARGO	IBM	07/27/2017	01/21/2020
US 7,676,452	METHOD AND APPARATUS FOR SEARCH OPTIMIZATION BASED ON	IBM	07/23/2002	03/09/2010
	GENERATION OF CONTEXT FOCUSED QUERIES			
US 9,785,145	CONTROLLING DRIVING MODES OF SELF-DRIVING VEHICLES	IBM	08/07/2015	10/10/2017
US 10,254,755	METHODS AND SYSTEMS FOR DRONE NETWORK DELIVERY SYSTEM	IBM	01/09/2017	04/09/2019
US 8,386,741	METHOD AND APPARATUS FOR OPTIMIZING DATA ALLOCATION	IBM	08/31/2010	02/26/2013
US 8,442,955	VIRTUAL MACHINE IMAGE CO-MIGRATION	IBM	03/30/2011	05/14/2013

US 9,684,493	R-LANGUAGE INTEGRATION WITH A DECLARATIVE MACHINE	IBM	06/02/2014	06/20/2017
	<u>LEARNING LANGUAGE</u>			
US 8,874,507	GOVERNING INFORMATION	IBM	03/23/2012	10/28/2014
US 9,361,325	GOVERNING INFORMATION	IBM	09/18/2014	06/07/2016
US 9,558,215	GOVERNING INFORMATION	IBM	04/29/2016	01/31/2017
US 7,185,057	INDIVIDUALLY SPECIFYING MESSAGE OUTPUT ATTRIBUTES IN A	IBM	07/26/2021	02/27/2007
	MESSAGING SYSTEM			
US 7,496,639	INDIVIDUALLY SPECIFYING MESSAGE OUTPUT ATTRIBUTES IN A	IBM	08/23/2006	02/24/2009
	MESSAGING SYSTEM			
US 7,568,014	INDIVIDUALLY SPECIFYING MESSAGE OUTPUT ATTRIBUTES IN A	IBM	06/17/2008	07/28/2009
	MESSAGING SYSTEM			
US 7,516,408	METHOD, SYSTEM AND PROGRAM FOR SWITCHING BETWEEN	IBM	09/28/2001	04/07/2009
	VARIOUS COMPUTER-BASED COMMUNICATION TECHNIQUES			
US 8,365,089	AUTOMATIC DEFAULTS PROXY FOR WEB-DELIVERED SERVICES	IBM	12/17/2007	01/29/2013
US 8,423,414	METHOD AND SYSTEM FOR PAUSING, MIGRATING, AND	IBM	02/12/2008	04/16/2013
	RESTARTING RETAIL POINT-OF-SALE TRANSACTIONS			
US 8,414,399	USER VALUE TRANSPORT MECHANISM ACROSS MULTIPLE VIRTUAL	IBM	06/23/2008	04/09/2013
	WORLD ENVIRONMENTS			
US 8,433,760	INTER-NODE COMMUNICATION SCHEME FOR NODE STATUS	IBM	12/03/2010	04/30/2013
	SHARING			
US 8,806,007	INTER-NODE COMMUNICATION SCHEME FOR NODE STATUS	IBM	03/21/2012	08/12/2014
	SHARING			
US 9,553,789	INTER-NODE COMMUNICATION SCHEME FOR SHARING NODE	IBM	06/25/2014	01/24/2017
	OPERATING STATUS			
US 9,582,577	GRAPHICAL DIAGRAM HAVING ELEMENTS THAT CORRESPOND TO	IBM	10/10/2011	02/28/2017
	OBJECTS AND THAT HAVE LOCATIONS IN CORRESPONDENCE WITH			
	APPEARANCE RELATIONSHIPS OF OBJECTS			
US 9,619,774	PRODUCT TRACKING SYSTEM	IBM	09/01/2011	04/11/2017
US 8,425,308	COUNTER-BALANCING IN-PLAY VIDEO GAME INCENTIVES	IBM	09/07/2011	04/23/2013
	REWARDS BY CREATING A COUNTER-INCENTIVE			
US 9,588,750	PSEUDO PROGRAM USE DURING PROGRAM INSTALLATION	IBM	03/22/2013	03/07/2017
US 9,645,713	PATTERN BASED VIDEO FRAME NAVIGATION AID	IBM	10/31/2013	05/09/2017
US 9,654,740	CONTROLLING AUTOMOTIVE REAR-VIEW MIRROR BASED ON EYE	IBM	05/28/2013	05/16/2017
	MOVEMENT			

US 9,553,720	USING KEY MATERIAL PROTOCOL SERVICES TRANSPARENTLY	IBM	12/23/2013	01/24/2017
US 9,5488,68	GATHERING PARTICIPANTS FOR MEETINGS	IBM	09/06/2013	01/17/2017
US 9,628,331	REROUTING SERVICES USING ROUTING POLICIES IN A MULTIPLE	IBM	06/17/2014	04/18/2017
	RESOURCE NODE SYSTEM			
US 9,552,223	POST-RETURN ASYNCHRONUS CODE EXECUTION	IBM	09/30/2014	01/24/2017
US 9,600,156	ENLARGING SELECTION REGION ASSOCIATED WITH SELECTED	IBM	09/26/2014	03/21/2017
	INFORMATION IN A DOCUMENT DISPLAYED ON A SCREEN OF A			
	COMPUTING DEVICE			
US 9,659,479	SYSTEM AND METHOD TO INDICATE LACK OF USAGE FOR	IBM	08/26/2015	5/23/2017
	PERSONAL ITEMS			
US 9,699,580	ELECTRONIC MEDIA VOLUME CONTROL	IBM	09/28/2015	07/04/2017
US 7,496,566	PRIORITY BASED LDAP SERVICE PUBLICATION MECHANISM	IBM	08/03/2005	2/24/2009
US 8,126,916	PRIORITY BASED LDAP SERVICE PUBLICATION MECHANISM	IBM	11/13/2008	02/28/2012
US 8,468,217	MAINTAINING PORTLET DATA CURRENCY WHILE MINIMIZING	IBM	07/26/2006	06/18/2013
	<u>LATENCY</u>			
US 7,559,052	META-MODEL FOR ASSOCIATING MULTIPLE PHYSICAL	IBM	11/6/2003	07/07/2009
	REPRESENTATIONS OF LOGICALLY EQUIVALENT ENTITIES IN			
	MESSAGING AND OTHER APPLICATIONS			
US 8,452,873	PROVISIONING OF RESOURCES IN A COMPUTER NETWORK	IBM	11/1/2006	05/28/2013
US 9,152,394	GENERATING APPLICATION MODEL BUILD ARTIFACTS	IBM	01/07/2013	10/06/2015
US 9,547,480	GENERATING APPLICATION MODEL BUILD ARTIFACTS	IBM	03/25/2014	01/17/2017
US 9,3616,42	PRODUCT EVALUATION SYSTEM FEATURING USER CONTEXT	IBM	11/30/2015	06/07/2016
	ANALYSIS			
US 9,552,429	PRODUCT EVALUATION SYSTEM FEATURING USER CONTEXT	IBM	04/13/2016	01/24/2017
	ANALYSIS			
US 9,602,950	CONTEXT-BASED DATA STORAGE MANAGEMENT BETWEEN	IBM	10/08/2015	03/21/2017
	<u>DEVICES AND CLOUD PLATFORMS</u>			
US 9,547,483	FEEDBACK DIRECTED OPTIMIZED COMPILING OF OPTIMIZED	IBM	11/6/2015	01/17/2017
	EXECUTABLE CODE			
US 9,576,276	CONTEXT-INFORMED SUMMARIZATION OF COMMUNICATIONS	IBM	11/29/2010	02/21/2017
US 9,621,619	ENHANCED NOTIFICATION FOR RELEVANT COMMUNICATIONS	IBM	02/21/2013	04/11/2017
US 7,496,518	SYSTEM AND METHOD FOR AUTOMATED SCREENING AND	Strategic	8/17/2000	02/24/2009
	QUALIFICATION OF EMPLOYMENT CANDIDATES	Outsourcing		
		Corporation		

US 8,386,329	SOCIAL NETWORK-BASED RECOMMENDATION	IBM	11/14/2011	02/26/2013
US 9,135,032	SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR	IBM	01/26/2011	09/15/2015
	DATA PROCESSING AND SYSTEM DEPLOYMENT IN A VIRTUAL			
	ENVIRONMENT			
US 9,582,311	SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR	IBM	08/24/2015	02/28/2017
	DATA PROCESSING AND SYSTEM DEPLOYMENT IN A VIRTUAL			
	<u>ENVIRONMENT</u>			
US 8,571,908	ALLOCATING COMMODITY SHELVES IN A SUPERMARKET	IBM	12/23/2011	10/29/2013
US 9,639,849	ALLOCATING COMMODITY SHELVES IN A SUPERMARKET	IBM	09/30/2013	05/02/2017
US 9,684,872	METHOD AND APPARATUS FOR GENERATING DATA IN A MISSING	IBM	06/04/2015	06/20/2017
	SEGMENT OF A TIME DATA SEQUENCE			
US 9,697,103	AUTOMATIC KNOWLEDGE BASE GENERATION FOR ROOT CAUSE IN	IBM	07/30/2015	07/04/2017
	APPLICATION PERFORMANCE MANAGEMENT			
US 9,558,245	AUTOMATIC DISCOVERY OF RELEVANT DATA IN MASSIVE	IBM	12/07/2015	01/31/2017
	DATASETS			
US 9,578,122	COMMUNICATING AN E-MAIL FROM A SENDER TO A PLURALITY OF	IBM	12/08/2015	02/21/2017
	RECIPIENTS			
US 7,545,261	PASSIVE METHOD AND APPARATUS FOR ALERTING A DRIVER OF A	IBM	09/02/2008	06/09/2009
	VEHICLE OF A POTENTIAL COLLISION CONDITION			
US 9,569,445	DYNAMIC ASSET ASSEMBLY USING A RULE BASED METHODOLOGY	IBM	06/30/2014	02/14/2017
US 9,674,237	FOCUS COORDINATION GEOGRAPHICALLY DISPERSED SYSTEMS	IBM	11/02/2014	06/06/2017
US 9,635,079	SOCIAL MEDIA SHARING BASED ON VIDEO CONTENT	IBM	11/12/2015	04/25/2017
US 9,639,625	PRESENTATION OF LINKS TO SOCIAL MEDIA WEBPAGES BASED ON	IBM	10/12/2016	05/02/2017
	SOCIAL EMINENCE OF POSTER			
US 8,364,122	DELAYED DELIVERY MESSAGING	IBM	11/07/2007	01/29/2013
US 7,483,786	METHOD AND SYSTEM FOR SELECTIVE ROUTE SEARCH ON SATELITE	IBM	05/15/2008	01/27/2009
	NAVIGATORS			
US 8,416,300	TRAFFIC SYSTEM FOR ENHANCING DRIVER VISIBILITY	IBM	05/20/2009	04/09/2013
US 8,817,099	TRAFFIC SYSTEM FOR ENHANCING DRIVER VISIBILITY	IBM	01/28/2013	08/26/2014
US 9,706,176	TRAFFIC SYSTEM FOR ENHANCING DRIVER VISIBILITY	IBM	08/18/2014	07/11/2017
US 9,547,841	DERIVING OVERLAY INFORMATION FROM A USER INPUT FOR A	IBM	09/30/2008	01/17/2017
	BASE MESSAGE SCHEMA ASSOCIATED WITH A NODE N A MESSAGE			
	FLOW			
US 9,582,410	TESTING SOFTWARE ON A COMPUTER SYSTEM	IBM	10/26/2011	02/28/2017

US 9,558,088	USING ENVIRONMENTAL SIGNATURES FOR TEST SCHEDULING	IBM	11/26/2013	01/31/2017
US 9,576,231	INTERPRETING A MATRIX CODE WITH INCREASED INFORMATION	IBM	09/02/2015	02/21/017
	DENSITY			
US 9,547,520	VIRTUAL MACHINE LOAD BALANCING	IBM	09/25/2015	01/17/2017
US 9,639,558	IMAGE BUILDING	IBM	09/17/2015	05/02/2017
US 9,549,044	DATA PROCESSING	IBM	11/23/2015	01/17/2017
US 8,132,185	DEVICE, SYSTEM, AND METHOD OF CLASSIFYING A WORKLOAD OF	IBM	09/24/2007	03/06/2012
	A SOFTWARE SERVICE			
US 8,413,159	CLASSIFYING WORKLOAD FOR A SERVICE	IBM	01/24/2012	04/02/2013
US 8,407,435	EFFICIENTLY CREATING A SNAPSHOT OF A LARGE CONSITENCY	IBM	09/25/2008	03/26/2013
	GROUP USING MULTPLE COMMANDS INCLUDING A SNAPSHOT			
	PREPARATION COMMAND			
US 8,448,141	EVALUATION OF SOFTWARE BASED ON CHANGE HISTORY	IBM	03/31/2008	05/21/2013
US 8,307,164	AUTOMATIC DETERMINATION OF READ-AHEAD AMOUNT	IBM	12/15/2009	11/06/2012
US 8,407,423	AUTOMATIC DETERMINATION OF READ-AHEAD AMOUNT	IBM	04/19/2012	03/26/2013
US 9,250,964	CONCURRENT COMPUTING WITH REDUCE LOCKING	IBM	08/27/2013	02/16/2016
	REQUIREMENTS FOR SHARED DATA			
US 9,563,484	CONCURRENT COMPUTING WITH REDUCED LOCKING	IBM	01/27/2016	02/07/2017
	REQUIREMENTS FOR SHARED DATA			
US 9,697,224	DATE DEDUPLICATION FOR AN EVENTUALLY CONSISTENT SYSTEM	IBM	02/09/2016	07/04/2017
US 9,619,332	METHOD AND SYSTEM FOR EFFICIENTLY MANAGING CONTENT ON	IBM	10/01/2007	04/11/2017
	AN INFORMATION HANDLING DEVICE			
US 9,569,254	AUTOMATIC CHECKPOINTING AND PARTIAL ROLLBACK IN	IBM	07/28/2009	02/14/2017
	SOFTWARE TRANSACTION MEMORY			
US 9,558,267	REAL-TIME DATA MINING	IBM	02/11/2011	01/31/2017
US 8,363,947	HANDWRITTEN CHARACTER RECOGNITION BASED ON FREQUENCY	IBM	07/31/2010	01/29/2013
	<u>VARIATIONS IN CHARACTERS</u>			
US 8,494,277	HANDWRITTEN CHARACTER RECOGNITION BASED ON FREQUENCY	IBM	01/04/2013	07/23/2013
	<u>VARIATIONS IN CHARACTERS</u>			
US 8,494,278	HANDWRITTEN CHARACTER RECOGNITION BASED ON FREQUENCY	IBM	01/04/2013	07/23/2013
	<u>VARIATIONS IN CHARACTERS</u>			
US 8,433,877	STORAGE SCALABILITY MANAGEMENT	IBM	10/22/2010	04/30/2013
US 9,582,782	DISCOVERING A REPORTING MODEL FROM AN EXISTING	IBM	04/04/2012	02/28/2017
	REPORTING ENVIRONMENT			

US 9,547,835	MODULARLY MANAGED SERVICE PLATFORM	IBM	08/20/2013	01/17/2017
US 9,569,486	SYSTEM AND A METHOD FOR HIERARCHICAL DATA COLUMN	IBM	09/27/2013	02/14/2017
	STORAGE AND EFFICIENT QUERY PROCESSING			
US 9,244,809	VALIDATING CODE OF AN EXTRACT, TRANSFORM AND LOAD (ETL)	IBM	07/15/2014	01/26/2016
	<u>TOOL</u>			
US 9,547,702	VALIDATING CODE OF AN EXTRACT, TRANSFORM AND LOAD (ETL)	IBM	11/30/2015	01/17/2017
	<u>TOOL</u>			
US 9,703,830	TRANSLATION OF A SPARQL QUERY TO A SQL QUERY	IBM	10/09/2014	07/11/2017
US 9,325,800	GENERATING A VISITATION SCHEDULE	IBM	12/18/2014	04/26/2016
US 9,659,282	GENERATING A VISITION SCHEDULE	IBM	02/17/2016	05/23/2017
US 9,560,152	PERSONALIZED SUMMARY OF ONLINE COMMUNICATIONS	IBM	01/27/2016	01/31/2017
US 8,387,045	CLONING IMAGE CREATION USING VIRTUAL MACHINE	IBM	03/12/2009	02/26/2013
	ENVIRONMENT			
US 8,447,586	APPARATUS AND METHOD FOR SUPPORTING VERIFICATION OF	IBM	02/09/2010	05/21/2013
	SOFTWARE INTERNATIONALIZATION			
US 8,751,445	METHOD OF SYNCHRONIZING DATA BETWEEN DATABASES, AND	IBM	03/30/2010	06/10/2014
	COMPUTER SYSTEM AND COMPUTER PROGRAM FOR THE SAME			
US 9,558,257	METHOD OF SYNCHRONIZING DATA BETWEEN DATABASES, AND	IBM	04/20/2014	01/31/2017
	COMPUTER SYSTEM AND COMPUTER PROGRAM FOR THE SAME			
US 7,543,016	METHOD, SYSTEM AND PROGRAM PRODUCT FOR AUTOMATICALLY	IBM	07/31/2003	06/02/2009
	ASSIGNING ELECTRONIC ADDRESSES TO USERS			
US 7,509,295	COMPUTER IMPLEMENTED METHOD FOR ANALYZING A	IBM	12/08/2003	03/24/2009
	COLLABORATIVE SPACE			
US 7,552,096	COMPUTER-IMPLEMENTED SYSTEM AND PROGRAM PRODUCT FOR	IBM	12/17/2008	06/23/2009
	ANALYZING A COLLABORATIVE SPACE			
US 8,832,200	LOGGING EXTERNAL EVENTS IN A PERSISTENT HUMAN-TO-HUMAN	IBM	07/19/2004	09/09/2014
	CONVERSTIONAL SPACE			
US 9,582,568	LOGGING EXTERNAL EVENTS IN A PERSISTENT HUMAN-TO HUMAN	IBM	08/15/2014	02/28/2017
	<u>CONVERSATIONAL SPACE</u>			
US 9,122,655	PRE-TRANSLATION TESTING OF BI-DIRECTIONAL LANGUAGE	IBM	11/15/2004	09/01/2015
	DISPLAY			
US 9,558,102	PRE-TRANSLATION TESTING OF BI-DIRECTIONAL LANGUAGE	IBM	07/29/2015	01/31/2017
	DISPLAY			

COLLABORATIVE COMPUTING ENVIRONMENT			05/16/2017
US 9,558,473 COLLABOARATIVE CONTACT MANAGEMENT	IBM	12/06/2005	01/31/2007
US 7,302,607 TWO NODE VIRTUAL SHARED DISK CLUSTER RECOVERY	IBM	08/29/2003	11/27/2007
US 7,533,295 TWO NODE VIRTUAL SHARED DISK CLUSTER RECOVERY	IBM	07/02/2007	05/12/2009
US 9,660,878 MANAGING FABRIC PRIORITIES ACROSS HETEROGENEOUS SERVER	IBM	03/14/2014	05/23/2017
PLATFORMS			
US 9,569,782 AUTOMATED CUSTOMER BUSINESS IMPACT ASSESSMENT UPON	IBM	09/28/2015	02/14/2017
PROBLEM SUBMISSION			
US 9,633,008 COGNITIVE PRESENTATION ADVISOR	IBM	09/29/2016	04/25/2017
US 7,543,182 AUTOMATED FAILOVER SYSTEM FOR LOGICAL PARTITIONS	IBM	01/12/2006	06/02/2009
US 8,453,061 SUGGESTION OF USER ACTION IN A VIRTUAL ENVIRONMENT BASED	IBM	10/10/2007	05/28/2013
ON ACTIONS OF OTHER USERS			
US 8,516,381 SUGGESTION OF USER ACTIONS IN A VIRTUAL ENVIRONMENT	IBM	12/12/2012	08/20/2013
BASED ON ACTIONS OF OTHER USERS			
US 8,366,229 INDICATION OF PRINT MEDIA QUALITY TO PRINTER USERS	IBM	04/27/2010	02/05/2013
US 9,004,674 INDICATION OF PRINT MEDIA QUALITY TO PRINTER USERS	IBM	10/29/2012	04/14/015
US 9,552,330 INDICATING A PAGE NUMBER OF AN ACTIVE DOCUMENT PAGE	IBM	03/23/2012	01/24/2017
<u>WITHIN A DOCUMENT</u>			
US 9,552,358 GUIDING A USER TO IDENTIFIED CONTENT IN A DOCUMENT	IBM	12/06/2012	01/24/2017
US 9,567,007 <u>IDENTIFYING COST-EFFECTIVE PARKING FOR AN AUTONOMOUS</u>	IBM	02/27/2014	02/14/2017
<u>VEHICLE</u>			
US 9,667,552 REAL-TIME SLA IMPACT ANALYSIS	IBM	09/26/2003	05/30/2017
US 8,209,548 SECURE CACHING TECHNIQUE FOR SHARED DISTRIBUTED CACHES	IBM	02/06/2006	06/26/2012
US 9,678,893 SECURE CACHING TECHNIQUE FOR SHARED DISTRIBUTED CACHES	IBM	05/04/2012	06/13/2017
US 9,026,990 DYNAMIC FILTERING OF A NAVIGATION PATH TO A SET OF	IBM	08/16/2005	05/05/2015
<u>MINIMUMS</u>			
US 9,558,188 DYNAMIC FILTERING OF A NAVIGATION PATH TO A SET OF	IBM	05/05/2015	01/31/2017
<u>MINIMUMS</u>			
US 8,380,794 GENERATING CONTEXT AWARE DATA AND CONVERSATION'S	IBM	01/09/2009	02/19/2013
MOOD LEVEL TO DETERMINE THE BEST METHOD OF			
<u>COMMUNICATION</u>			
US 9,552,146 NOTCHED SLIDER CONTROL FOR A GRAPHICAL USER INTERFACE	IBM	07/07/2008	01/24/2017
US 9,232,263 RENDERABLE CONTENT PARTITIONING AND PORTABILITY	IBM	09/01/2009	01/05/2016

US 9,628,847	RENDERABLE CONTENT PARTITIONING AND PORTABILITY	IBM	11/30/2015	04/18/2017
US 8,364,298	FILTERING APPLICATION SOUNDS	IBM	07/29/2009	01/29/2013
US 8,458,205	IDENTIFYING A GROUP OF PRODUCTS RELEVANT TO DATE	IBM	11/30/2009	06/04/2013
	PROVIDED BY A USER			
US 9,354,071	DYNAMICALLY DETERMINING MEETING LOCATIONS	IBM	09/25/2014	05/31/2016
US 9,546,880	DYNAMICALLY DETERMINING MEETING LOCATIONS	IBM	05/30/2015	01/17/2017
US 9,552,810	CUSTOMIZABLE AND INDIVIDUALIZED SPEECH RECOGNITION	IBM	03/31/2015	01/24/2017
	SETTINGS INTERFACE FOR USERS WITH LANGUAGE ACCENTS			
US 9,619,945	RECOMMENDING AN ALTERNATIVE ROUTE TO A SERVICE	IBM	03/2602015	04/11/2017
	LOCATION TO SERVICE A VEHICLE ISSUE THAT WAS DETECTED BY A			
	CHANGE IN STATUS IN A SENSOR OF THE AUTOMOBILE'S			
	<u>DIAGNOSTIC SYSTEM</u>			
US 9,548,958	DETERMINING POST VELOCITY	IBM	06/16/2015	01/17/2017
US 6,950,836	METHOD, SYSTEM AND PROGRAM FOR A TRANSPARENT FILE	IBM	03/14/2003	09/27/2005
	RESTORE			
US 7,509,357	TRANSPARENT FILE RESTORE	IBM	07/26/2005	03/24/2009
US 7,685,180	SYSTEM AND ARTICLE OF MANUFACTURE FOR TRANSPARENT FILE	IBM	11/18/2008	03/23/2010
	RESTORE			
US 9,158,513	PREPROCESSING KERNEL PRINT COMMANDS	IBM	08/27/2013	10/13/2015
US 9,569,304	PREPROCESSING KERNEL PRINT COMMANDS	IBM	08/05/2015	02/14/2017
US 9,665,459	PROVIDING A USER INTERFACE TO ENABLE SELECTION OF STORAGE	IBM	01/06/2014	05/30/2017
	SYSTEMS, COMPONENTS WITHIN STORAGE SYSTEMS AND			
	COMMON PERFORMANCE METRICS FOR GENERATING			
	PERFORMANCE METRIC REPORTS ACROSS STORAGE SYSTEMS AND			
	COMPONENTS			
US 7,496,887	INTEGRATION OF DATA MANAGEMENT OPERATIONS INTO A	IBM	03/01/2005	02/24/2009
	WORKFLOW SYSTEM			
US 7,89,0922	SYSTEM AND ARTICLE OF MANUFACTURE FOR INTEGRATION OF	IBM	01/06/2009	02/15/2011
	DATA MANAGEMENT OPERATIONS INTO A WORKFLOW SYSTEM			
US 8,364,393	INFORMATION TECHNOLOGY FOR FINDING A LOCATION BASED ON	IBM	07/29/2009	01/29/2013
	AN IMAGE AT ANOTHER LOCATION			
US 9,177,021	RELATIONAL QUERY PLANNING FOR NON-RELATIONAL DATA	IBM	06/09/2011	11/03/2015
	<u>SOURCES</u>			

US 9,558,239	RELATIONAL QUERY PLANNING FOR NON-RELATIONAL DATA	IBM	07/16/2012	01/31/2017
	SOURCES			
US 9,619,363	PREDICTING SOFTWARE PRODUCT QUALITY	IBM	09/25/2015	04/11/2017
US 9,548,991	PREVENTING APPLICATION-LEVEL DENIAL-OF-SERVICE IN A MULTI-	IBM	12/29/2015	01/17/2017
	TENANT SYSTEM USING PARAMETRIC-SENSITIVE TRANSACTION			
	WEIGHTING			
US 9,386,092	COST OPTIMIZED EAIL ATTACHMENT DOWNLOAD IN A MOBILE	IBM	01/12/2016	07/05/2016
	DEVICE			
US 9,577,971	COST OPTIMIZED EMAIL ATTACHMENT DOWNLOAD IN A MOBILE	IBM	06/13/2016	02/21/2017
	DEVICE			
US 8,400,322	APPARATUS, SYSTEM, AND METHOD FOR SCALABLE MEDIA	IBM	03/17/2009	03/19/2013
	<u>OUTPUT</u>			
US 8,423,590	FILE GENERATION FOR TESTING SINGLE-INSTANCE STORAGE	IBM	05/30/2010	04/16/2013
	ALGORITHM			
US 8,458,510	LPAR CREATION AND REPAIR FOR AUTOMATED ERROR RECOVERY	IBM	08/12/2010	06/04/2013
US 8,806,265	LPAR CREATION AND REPAIR FOR AUTOMATED ERROR RECOVERY	IBM	05/14/2013	08/12/2014
US 8,954,985	DEPENDENCY MANAGEMENT IN TASK SCHEDULING	IBM	06/05/2012	02/10/2015
US 8,959,527	DEPENDENCY MANAGEMENT IN TASK SCHEDULING	IBM	11/05/2013	02/17/2015
US 9,632,826	PRIORITIZING DEFERRED TASKS IN PENDING TASK QUEUE BASED	IBM	02/10/2015	04/25/2017
	ON CREATION TIMESTAMP			
US 9,660,882	SELECTIVE CONVOLUTION ENCODING OF DATA TRANSMITTED	IBM	01/07/2014	05/23/2017
	OVER DEGRADED LINKS			
US 9,552,263	SYSTEM, APPARATUS, AND METHOD TO DYNAMICALLY CHANGE	IBM	08/12/2014	01/24/2017
	SYSTEM RECOVERIES BASED ON SYSTEM LOAD			
US 9,703,619	DETERMINING AN AVAILABILITY SCORE BASED ON AVAILABLE	IBM	05/28/2014	07/11/2017
	RESOURCES OF DIFFERENT RESOURCE TYPES IN A STORAGE			
	SYSTEM TO DETERMINE WHETHER TO PERFORM A FAILURE			
	OPERATION FOR THE STORAGE SYSTEM			
US 9,558,087	TEST VIRTUAL VOLUMES FOR TEST ENVIRONMENTS	IBM	06/23/2014	01/31/2017
US 9,575,803	DETERMINING AN ORDERING TO USE TO OPEN AND CLOSE	IBM	02/13/2015	02/21/2017
	PROGRAMS THAT CALL OTHER PROGRAMS			
US 9,557,984	PERFORMING CODE LOAD OPERATIONS ON MANAGED	IBM	03/16/2015	01/31/2017
	COMPONENTS IN A SYSTEM			
US 9,652,406	MRU BATCHING TO REDUCE LOCK CONTENTION	IBM	04/30/2015	05/16/2017

US 9,632,716	METHOD, SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR	IBM	01/13/2016	04/25/2017
	CONSISTENT ASYNCHRONOUS REPLICATION OF LOCAL BACKUP			
US 7,526,765	METHOD AND APPARATUS FOR ON-DEMAND AND RESOURCE	IBM	11/26/2003	04/28/2009
	ALLOCATION AND JOB MANAGEMENT			
US 8,365,173	METHOD AND APPARATUS FOR ON-DEMAND RESOURCE	IBM	06/30/2008	01/29/2013
	ALLOCATION AND JOB MANAGEMENT			
US 7,483,986	DYNAMICALLY TUNING NETWORKS OF RELATIONSHIPS IN SELF-	IBM	12/03/2003	01/27/2009
	ORGANIZING MULTI-AGENT SYSTEMS			
US 7,480,414	METHOD AND APPARATUS FOR OBJECT NORMALIZATION USING	IBM	10/14/2004	01/20/2009
	OBJECT CLASSIFICATION			
US 7,539,654	USER INTERACTION MANAGEMENT USING AN ONGOING ESTIMATE	IBM	01/21/2005	05/26/2009
	OF USER INTERACTION SKILLS			
US 8,473,604	METHOD FOR INTELLIGENT AND AUTOMATED TRANSMISSION OF	IBM	06/23/2008	06/25/2013
	LOCAL CONTEXT IN CONVERGED SIGNALING			
US 8,373,665	INTERACTIVE DISPLAY DEVICE	IBM	07/26/2007	02/12/2013
US 9,552,349	METHODS AND APPARATUS FOR PERFORMING SPELLING	IBM	08/31/2006	01/24/2017
	CORRECTIONS USING ONE OR MORE VARIANT HASH TABLES			
US 8,560,563	APPARATUS AND METHOD OF SEMANTIC SERVICE CORRELATION	IBM	07/09/2008	10/15/2013
	<u>SYSTEM</u>			
US 9,552,389	APPARATUS AND METHOD OF SEMANTIC SERVICE CORRELATION	IBM	07/26/2013	01/24/2017
	<u>SYSTEM</u>			
US 8,359,216	SYSTEM AND METHOD FOR FINDING BUSINESS TRANSFORMATION	IBM	10/01/2008	01/22/2013
	OPPORTUNITIES BY USING A MULTI-DIMENSIONAL SHORTFALL			
	ANALYSIS OF AN ENTERPRISE			
US 8,365,019	SYSTEM AND METHOD FOR INCIDENT MANAGEMENT ENHANCED	IBM	06/16/2009	01/29/2013
	WITH PROBLEM CLASSIFICATION FOR TECHNICAL SUPPORT			
	<u>SERVICES</u>			
US 9,261,375	ANOMALY DETECTION FOR ROAD USER CHARGING SYSTEMS	IBM	04/01/2010	02/16/2016
US 9,618,350	ANOMALY DETECTION FOR ROAD USER CHARGING SYSTEMS	IBM	01/14/2016	04/11/2017
US 8,386,298	COMPETING SIMULATOR IN MULTI-CHANNEL RETAILING	IBM	08/18/2010	02/26/2013
	ENVIRONMENT AMONG MILTIPLE RETAILERS			
US 8,359,316	DATABASE TABLE LOOK-UP	IBM	03/01/2010	01/22/2013
US 8,386,285	DEMAND MODELING AND PREDICTION IN A RETAIL CATEGORY	IBM	05/25/2011	02/26/2013
US 9,418,354	FACILITATING USER INCIDENT REPORTS	IBM	03/27/2013	08/16/2016

US 9,633,334	FACILITATING USER NCIDENT REPORTS	IBM	08/23/2013	04/25/2017
US 9,569,288	APPLICATION PATTERN DISCOVERY	IBM	07/15/2014	02/14/2017
US 9,654,414	SCHEDULING COST EFFICIENT DATACENTER LOAD DISTRIBUTION	IBM	09/18/2014	05/16/2017
9547534	AUTOSCALING APPLICATIONS IN SHARED CLOUD RESOURCES	IBM	10/10/2014	01/17/2017
9601018	DISTRIBUTED PARKING SPACE DETECTION, CHARACTERIZATION	IBM	03/12/2015	03/21/2017
	ADVERTISEMENT, AND ENFORCEMENT			
9565460	DYNAMIC VIDEO CONTENT CONTEXTUALIZATION	IBM	09/01/2015	02/02/2017
9626646	DISTRIBUTED OPTIMIZATION METHOD FOR REAL-TIME	IBM	11/25/2015	04/18/2017
	OMNICHANNEL RETAIL OPERATIONS			
9599986	EMERGENCY AUTOMATED SYSTEM TO MONITOR EMERGENCY	IBM	12/22/2015	03/21/2017
	MEDICAL EVENT THROUGH BODY AREA NETWORKS			

App. Number	Title	Applicant	Filed	Publication
16/543,210	REAL-TIME PRODUCT SELECTION GUIDANCE FOR CONDITIONAL	IBM	08/16/2019	12/12/2019
	SALES			
12/196,112	HIGHLIGHTING RELATED USER INTERFACE CONTROLS	IBM	08/21/2008	12/11/2008
15/714,747	INGREDIENT BASED NUTRITIONAL INFORMATION	IBM	09/25/2017	01/04/2018
15/714,798	INGREDIENT BASED NUTRITIONAL INFORMATION	IBM	09/25/2017	01/04/2018
14/811,997	INGREDIENT BASED NUTRITIONAL INFORMATION	IBM	07/29/2015	02/02/2017
15/847/345	CONTEXT-AWARE TAGGING FOR AUGMENTED REALITY	IBM	12/19/2017	05/04/2021
	<u>ENVIRONMENTS</u>			
<mark>61897888</mark>	NOT AVAILABLE - inactive	IBM	10/31/2013	
16/516,361	AUTONOMOUS PRESENTATION OF A SELF-DRIVING VEHICLE	IBM	07/19/2019	11/07/2019
16/745,818	AUTONOMOUS PRESENTATION OF A SELF-DRIVING VEHICLE	IBM	01/17/2020	05/14/2020
13/921,803	PATTERN BASED VIDEO FRAME NAVIGATION AID	IBM	06/19/2013	12/25/2014
15/445,405	PATTERN BASED VIDEO FRAME NAVIGATION AID	IBM	02/28/2017	06/15/2017
15/447,399	PATTERN BASED VIDEO FRAME NAVIGATION AID	IBM	03/02/2017	06/22/2017
<mark>61700784</mark>	NOT AVAILABLE - inactive	IBM	09/13/2012	
13/743,738	SOCIAL NETWORK-BASED RECOMMENDATION	IBM	01/17/2013	05/30/2013
15/497,474	FOCUS COORDINATION IN GEOGRAPHICALLY DISPERSED SYSTEMS	IBM	04/26/2017	08/10/2017
11/333,921	METHOD FOR INTELLIGENT AND AUTOMATED TRANSMISSION OF	IBM	01/18/2006	07/17/2007
	LOCAL CONTEXT IN CONVERGED SIGNALING			