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Review of Cargo Localization Policy for Reviving Idle Ports in Nigeria: A Port Decongestion Strategy.

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Abstract: *This paper is an attempt to review the cargo localization policy in Nigeria by proffering new dimensions towards its achievement and implementation in the maritime sub-sector of the Nigerian economy. The numerous problems associated with port congestion were the influential factors necessitating the purpose of this research in a bid to provide policy solutions to the problems. Specific objectives were to propose a sustainable policy to decongest the Nigerian ports and to determine the direct, indirect and induced effects of EGTL Logistics towards the efficiency of the ports. A mixed method research was adopted for the policy objective and impacts. While qualitative data was used to arrive at a policy framework, quantitative data was used for the impact assessment using input-output analysis. Results reveal that the cargo localization policy implementation will significantly reduce congestion at the ports. Further analysis results show that the EGTL logistics operations at the ports gave value added worth of $103,169,587,160.50 as contribution to the maritime sub- sector of the economy. Hence effective policy implementation would significantly reduce congestion while increased logistics operations at the ports as that powered by EGTL project would boost the maritime gross domestic product contribution to the economy. Therefore, it is recommended that government and policy makers in the port sector should adopt the cargo localization policy for sustainable port efficiency.*

Keywords: Port Congestion; Idle Ports; Cargo Localization Policy; EGTL; Economic Impacts.

I. Introduction.

Seaports play a major role in the development and reengineering of a country's economic system as they form the maritime gateway to the international community. Essentially, they are the focus of a broad spectrum of maritime activities generating significant jobs and economic growth. Basically, seaports function as interface between ocean borne and land traffic and international trading centers. This function enables Ports to impact on the development of the geographical regions where they are located and feed with their cargo. The cost of investing in seaport infrastructure is usually colossal and for these costs to be justified and recouped, the port must be effectively managed to attract adequate cargo because volume of cargo handled translates to port income. Therefore, a port weighed down by congestion or starved of cargo, falls short of maximizing its vital role in the logistics value chain (Eru, 2018; Jaja, 2009).
The focus of this paper is to proffer sustaining solution to the extreme cases of congestion and idleness plaguing the Nigerian port system.

1.1 Problem Statement

Various studies have revealed the extent to which congestion affected the port system. Olorunpomi (2010) asserts that the estimated cost of traffic congestion in Lagos as at 2009, was US$1 billion (about N150 billion Naira), per year. That Lagosians collectively lose 3 billion hours to traffic congestion yearly, and if that time is reduced by 20%, it would save the state at least US$1 billion (about N150 billion Naira), per year. (EIU of Lagos MEPB, 2013). In the same year, the President of the National Council of Managing Directors of Licensed customs agents, Lucky Amiwero, stated that Nigeria lost over US$7 billion due to the Lagos ports congestion in 3 months! (Vanguard Newspapers / People's Daily Online, Jan 09, 2009).

As at July 2017, the punch Newspapers reported a 400% rise in port users' costs due to the Apapa gridlock. A 40ft container truck delivery that used to cost N40,000.00 within Lagos had risen to N200,000.00 because it spent an average of five days on the gridlock as against, one day when the ports and roads were free from congestion. At the same time, cargo owners were parting with N25,000.00 per container per day for cargo trapped at the ports. Imagine how much an importer who

has 50 containers or more would part with, and the effect this would have on the final retail price of the goods, which of course is passed on to the final consumer.

These costs would even be much higher today if fresh research is carried out. As we speak, the ports of Lagos - Apapa and Tin Can - are experiencing very serious cargo and vessel congestion, because surprisingly enough, 80% of the country's import still goes through the Lagos ports. The spillover of this congestion to road transport is currently creating heavy traffic gridlocks along the Apapa – Mile 2 highway, extending to Oshodi axis. Apart from the huge demurrage costs arising from this congestion, commuters' movement is greatly impaired as private cars, commercial vehicles and haulage trucks are trapped and held standstill for long hours and days (in some cases) on the traffic. This is creating untold hardship to individuals and impacting negatively on the resources of companies and the economy generally, just as Ndikom (2011) asserts that the performance of a nation's economy is critically dependent on the quality and cost of its logistical support.

Sadly, enough, while the ports in Lagos are choking with congestion, ports in other regions, notably Warri, Koko and Calabar are terribly starved of cargo, and their infrastructures are decaying and wasting away. A current tour of the erstwhile ultra-modern new port of Warri port, with its central location and good road connectivity to Northern and Eastern Nigeria, would leave one almost weeping when reminiscing on the period when this port was bubbling with shipping activities and the positive economic effect it generated to Warri and the state. The quays are idle, sheds empty and dilapidating, stacking areas overgrown with weeds, and the environment almost desolate. In recent years many companies have closed their offices and moved out of the port and Warri because of lack of activities while those that manage to keep their offices have greatly reduced their labour force. Only the Julius Berger berth is a little lively with occasional vessel calls bearing their own construction materials, while Intels, the main concessionaires, are groping with empty berths and struggling to keep the port infrastructure at a minimal maintenance level. The situation is somewhat similar in Calabar and Port Harcourt. Koko, of course has been moribund for many years without a single shed roof standing.

1.2 Aim and Objectives

The key objective of this research is to review the cargo localization policy in Nigeria to reduce congestion at the major ports by reviving idle ports. Specific objectives include to:

i. propose a sustainable policy to decongest the Nigerian ports
ii. determine the direct, indirect and induced effects of EGTL Logistics towards the efficiency of the ports.

1.3 Research Questions

i. What is the solution to port congestion and idle ports in Nigeria?
ii. What effect has the EGTL logistics on port efficiency in Nigeria?

II. Review of Theories and Concepts

2.1 Theory of Cement Amada in Nigeria

The post-civil war phenomenon of 'cement amada' of 1975, created the first major ship and cargo congestion in the Lagos port of Apapa, Nigeria. As a palliative measure, the Federal Government embarked on port construction, expansion and rehabilitation, and between 1977 and 1996 the move gave birth to other modern ports such as, Tin can port in Lagos; Delta ports of Warri, Burutu and Koko; Eastern ports of Calabar, Port Harcourt (rehabilitated) and Onne (FLT and FOT). Despite this development, the port congestion syndrome has continued to plague the Lagos ports and also generating serious road traffic gridlocks within that port zone, all leading to colossal economic loss. This is because more than 80% of Nigeria's import still goes through the Lagos ports while Delta and Eastern ports are terribly starved of cargo, leading to their idleness, infrastructural decadence and deprivation of their regional economic impacts. The pertinent question therefore is, why choke the Lagos ports again and again despite the facilities available in other port regions? Cargo Localization Policy, born out of doctoral research by the author, is aimed at addressing this shipping and logistics imbalance with a legal backing.

2.1.1 The second Cement Armada.

As if the lessons of 1975 were not enough, the Cement Armada phenomenon repeated itself during the Shagari led administration between 1981 and 1983, when the ruling NPN party came up with the idea of nationwide federal housing project for low-income earners. The end result was massive importation of cement, which was again directed to the Lagos ports!! According to Wole Soyinka (1996), "the cement armada that choked up the ports of Lagos, earned enterprising

foreign and local shipping companies – many of them formed for that purpose – millions of dollars in demurrage fees … parade of vessels that stretched out from Lagos harbor into miles and miles of international waters". The question that comes to mind here is why choke the Lagos ports again despite the facilities available in other port regions outlined above?

2.2 Theory of Port Congestion in Nigeria

The first major port congestion in Nigeria was caused by what was known in shipping parlance as **'Cement Amada' of 1975** (Oluwaseun, 2005). At the end of the civil war in 1970, the Military Government of Nigeria, headed by General Yakubu Gowon, formulated a paradigm of the 3Rs – Reconciliation, Reconstruction and Rehabilitation; which were meant to reunite and reintegrate the country and cushion the effect of the war, especially in the regions which suffered severe damages (Abdullahi et al 2012; Udeajah 2017). Of these three, Reconstruction took the front burner in order to repair and recreate damaged infrastructure as well as build modernized ones afresh. The major imported construction material needed to achieve this purpose, was of course, cement. The process received a further boost by the sudden quadrupling of Nigerian's foreign earnings following the sharp rise in crude oil prices caused by the six days' war between Israel and the Arabs. In a rehabilitation gesture, following the excess money available, the Federal Government in 1974, implemented the Udoji award which doubled the salary of every Nigerian worker, thereby reverberating wealth throughout the economy (Oluwaseun, 2005).

Thus, apart from the Federal Government embarking on the reconstruction of national infrastructure, the citizens with new found wealth, yearned to build their own houses. This resulted in severe cement shortage in the country as its demand sky-rocketed and opened the window for massive cement importation. The Federal Government alone, in pursuant of its massive Barrack building program, for the MOD (Ministry of Defence), to settle the soldiers into the barracks, ordered 16 million metric tons of cement, which amounted to 80% of the country's total cement import.

At that time, all Nigerian ports combined,could only handle 6.5 million metric tons of general cargo (cement inclusive), per annum but the military government expected all 16 million metric tons delivered within 12 months! Other government agencies such as the Federal Housing Authority and the Nigerian National Supply Company also ordered about 4 million metric tons of cement to be delivered within one year. As a result, by April 1975, about 105 ships were waiting at the Nigerian territorial waters for berthing space at the ports. In two months, the number increased to 455, out of which 300 were cement vessels. Each vessel waited an average of 180 days before berthing and freight surcharge of 30% to 100% were paid, per vessel, creating a rippling effect of high import prices. It was estimated that the Government paid about USS$4,100 per day as demurrage for each cement vessel, after 10 days of delay. Sadly, enough, it was estimated that the cost of importing the cement at that time, could build 20 cement factories in Nigeria (Ibikunle, 1976; Oluwaseun, 2005).

This occurrence popularly referred to as "Cement Amada or Armada", in Nigerian shipping history, opened the eyes of the government to the need for additional seaports in the country. The issue of ports development ceased to be just an NPA affair but became a national issue.

2.3 Concept of Port Expansion

The port of Apapa in Lagos was virtually overwhelmed by war-time and post war cargo, including the cement volume outlined above, being the only available port serving the country's maritime transportation needs, since a section of Port Harcourt port was damaged and thus the port was closed to foreign traffic. This congestion led NPA to accelerate the expansion of port facilities. The initial move was to acquire the ports of Warri from John Holt, Burutu from UAC and Calabar from the 5 operators that owned it. This was followed by the rehabilitation and reconstruction of the ports of Port Harcourt, Bonny, Calabar, Koko and a third terminal in Apapa. The government spent over 190 million Naira to complete the ultra-modern Tin Can Island port including 2 ro-ro berth facilities, commissioned on October 14, 1977.The New Warri port was commissioned on June 16th 1979, while the new Calabar port was commissioned on June 19th 1979. It also constructed three lighter terminals in KiriKiri, Onne and Ikorodu. (www.nimasaelibrary.com).

The entrance into the Nigerian port system of the Federal Ocean Terminal (FOT) in Onne, the first planned Deepsea port in the country, which had its first phase commissioned in 1996, was aimed at changing the narratives. It was conceived both as a port of long-term measures against possible repeat of the congestion experience of the mid 70s and also as a response to the projected needs of the nation's maritime sector, in service to the oil and gas, petrochemical and iron and steel industries. It was designed to accommodate ships of up to 35,000 tons dead-weight and 60,000 tons dead-weight, after expansion. Today, FOT stands out as one of the most vibrant Oil and Gas Free Zones in the world and the largest of its kind in Africa. (www.nimasaelibrary.com).

2.4 Concept of Cargo Localization

Above line of thought, led to the formulation of the concept of Cargo Localization stated viz:

"Import cargo meant for use in a particular region should be shipped to and handled by the nearest customs port to its point of utilization."
Apart from checking cargo lopsidedness where some ports are starved of cargo while others experience congestion with resultant higher cost of operation, the process would also generate economic growth and development in the various port regions as well as reduce haulage costs (Eru, 2018).

2.4.1Conditions Precedent to the Implementation of the Concept
For this concept to work effectively, certain conditions and measures must be put in place in all ports to check any factor that will militate against its effective implementation. These include:

1) **Ports' readiness to receive and handle all cargoes.**
   a) Rehabilitation of all dysfunctional port infrastructures and cargo handling equipment.
   b) Maintenance of suitable drafts at port approach channels and berths – dredging to attain the right depths free from wreckages e.g. the Escravos bar which forms the entrance from sea to the Delta ports of Warri and Koko has 6m as its maximum depth at high tide, whereas a sizeable liner vessel carrying containers could draw between 7m to 9m, full lading. The depth of this entrance, we understand, is restricted by underground petroleum pipelines which prevents its deeper dredging. We believe, with the right collaboration between the government and the International Oil Companies (IOCs), such pipelines can be lowered to create deeper draft for free vessel passage.
   c) Security and safety along the creek routes leading to the ports and at the ports. Again, collaboration between government agencies and various local agencies can yield the required results, just like the case during the EGTL project. ISPS code should be strictly upheld at the ports.
   d) Tariff harmonization among all concessionaires and operators – competiveness. Let there be a ceiling in the tariff, under which the operators can play.

2) **Legislative and Executive Backing.**
   In order to be effective, this process should have legal backing in the form of a bill passed by Federal Legislature and assented to by the Federal Chief Executive (President) of the country. By this it becomes a legal policy binding on all stakeholders of the maritime logistics sector.

2.4.2Policy Thrust: Cargo Localization Policy (CLP).
For the concept to transform into a policy, a team of qualified personnel drawn from NPA, Nimasa, Customs, relevant professional bodies and the academia, should be assembled to work out and draft a bill for presentation to the National Assembly for passage and assent. Sponsorship of the bill on the floors of the Senate and House of Representatives should be by elected Senators and Representatives to be selected by the team.
Among other considerations, the policy drafting team would:

1) State the policy clearly as "import cargo meant for use in a particular region should be shipped to and handled by the nearest customs port to its point of utilization."
2) Create and assign CLP Code to every Customs port in the Country. This code shall be inserted on bills of lading conveying cargo from foreign seaports to Nigerian ports.
3) Geographically delimit the catchment area (hinterland) of each Customs port which forms the extent of final utilization points of cargo through the port.
4) Work out penalty surcharge, in percentage, against offenders who choose to ship their cargo through a port other than the one nearest to their point of utilization. This surcharge shall be recovered alongside normal customs duties by the Customs Service through the CPL code on the bill of lading. Customs on road checks can also monitor this and enforce sanctions on cargo that is going out of its declared utilization zone.
5) Work out a sharing formula of this surcharge between agencies in the rightful port – NPA and Customs, etc.
6) Insert into the draft bill, the conditions precedent to the implementation of the concept as outlined above.
7) Include any other consideration that is deemed necessary for the effective implementation of the policy.
8) Work out and establish detail of spheres of responsibility for the selected government agencies that would enforce the policy.
9) Sensitize stakeholders and politicians to facilitate the passage of the bill through the National Assembly.
10) Establish and coordinate a procedure to train stakeholder representatives who will operate the policy in their various organizations, after it is passed into law.

2.4.3Enforcement of the Policy and Training of Stakeholders

1) Enforcement: The main government supervising agency shall be The Nigerian Maritime Administration and Safety Agency (NIMASA) with an established desk. The Nigeria Ports Authority (NPA) and The Nigeria Customs Service (NCS) shall also have respective desks created to enforce the policy in their organizations. Details of spheres of responsibility for these 3 bodies should have been worked out and established by the policy drafting team.

2) Training: For effective enforcement, there shall be an incubation period between final passage of the bill and actual take-off (implementation), during which, proper training of desk and field staff charged with the responsibility of enforcing the law, shall be undertaken. This period would also allow for wide enlightenment on the policy both locally and internationally. Trainers would be drawn from renowned bodies such as, The Chartered Institute of Logistics and Transport (CILT), The Nigerian Institute of Training and Development (NITAD), Center for Management Development (CMD), the Academia, etc.

2.4.4Benefits of the Policy

1) Decongestion of overcrowded ports and revival of idle ports through even distribution of import cargo.
2) Reduction in shipping costs - demurrage and storage charges.
3) Reduction of inland transport costs of haulage and subsequent reduction in prices of consumer goods.
4) Stimulation of balanced economic growth in port regions.
5) Creation of new, and revival of lost, job opportunities, leading to reduction in youth restiveness in hitherto idle ports' zones.
6) Drive state and regional governments to push for the development and maintenance of port facilities and industrial activities that would attract cargo and further economic development to their regions.

2.4.5 Challenges of getting the Policy through the whole process and Apparent mitigating actions.

1) **Funding:**
   The main challenge is the initial funding of the process through the drafting stage. The team members would need transport, accommodation, feeding and moderate honorarium to enable them come together, brainstorm, carry out sub-studies, and produce a final draft policy. The next funding challenge would be the cost of facilitating the bill through the national assembly.
   It is hoped that the stakeholder organizations championed by NIMASA would assist, as well as individuals, corporate bodies, politicians, etc. We shall reach out in this regard, with proposals for assistance.
   We also intend to explore the possibility of accessing research grants from local and international bodies, to assist in the process.
2) **Surmounting the National Assembly Bureaucratic Process**
   There is no gain-saying that the earlier this bill is passed and assented into law, the better for the sanitization of our shipping sector which is already weighed down by congestion on one side and idleness at other extreme.
   Efforts should be made for a fast-track passage of the bill by the national Assembly. We therefore solicit support from our elected National legislators who would drive the process through the National Assembly, in this regard.

III. Materials and Method

Primary and secondary data were collected for the analysis. This implies that a mixed method approach was used where qualitative data was used to arrive at a policy framework and quantitative data was used for the impact assessment using input- output analysis.

IV. Results and Discussion

4.1 Presentation of EGTL Impact Results

Table 4.1: Summary of Total Impacts from EGTL Logistics

Summary Of Total Impacts - EGTL LOGISTICS

Impact Type	Employment	Labor Income (₦)	Total Value Added (₦)	Output (₦)	StateTax (₦)
Direct Effect	5,278	3,982,142,316.7	68,512,286,041.6	104,539,462,120.0	137,989,736.2
Indirect Effect	33,086	1,178,905,132.9	30,273,520,844.5	33,488,691,731.0	
Induced Effect	7,946	243,392,071.2	4,383,780,274.3	5,444,266,371.4	
Total Effect	**46,310**	**5,404,439,520.8**	**103,169,587,160.5**	**143,472,420,222.4**	**137,989,736.2**

Source: Compiled From Impact Output Tables (Eru, 2018).

4.2 Discussion of Results.

This paper is a fall out from the Doctorate thesis of Eru U. John, as one of its recommendations and contribution to knowledge. The thesis titled: "Economic Impacts of the Logistical Support of the Escravos Gas-To-Liquid Project on Warri Port and its Environs" was inspired by the relocation of the logistics support base of the EGTL project from Onne port to Warri port.

During the planning stage of the project, SGC/KBR and Chevron ruled out the possibility of using the Warri Port mainly because of the factor of insecurity, leading to the choice of Onne Port with resultant high cost of barge haulage and higher sailing risk through the longer Sea route to Escravos. Between 2006 and early 2008, more than 195,000 cubic meters (Freight tons) of project cargo weighing about 5,485,572 kg were received through the Onne Port and transported by barge via Sea to Escravos which is actually situated in Delta State and nearer to Warri from where it could be accessed easily via the creeks. By the middle of 2007 however, the Delta State Government made a proclamation that unless the project cargoes were imported through Warri port, the project which is located in Delta State shall not enjoy the state government's support and this could lead to its truncation. The state government further promised and also put in place security system to make the creeks and the port environment free from insecurity and become more business friendly. This led to the logistics reappraisal both in cost and political implications by the joint venture which decided to shift the major shipping and logistics operation involving chartered vessels to Warri port in early 2008. Thus the first chartered vessel, MV Korsoer berthed at the Warri Port on April 25th 2008 and the last vessel, MV UAL America berthed in August 2013.

Looking at this scenario, we became interested in evaluating the extent at which the processing of the 4th Party Logistics (Project Logistics Support) through the Warri port has impacted on it and its environs (Eru, 2018).

It is worthy to note that prior to the relocation of the logistics base to Warri, the Port of Warri with its relatively modern facilities resulting from recent investment upgrade and management by Intels, being the major concessionaires, was moribund with "less than 20% capacity utilization, and was a port weighed down in the aftermath of restiveness and weakened Port facilities and infrastructure, which led to loss of shippers' confidence, increased cost of freight and absence of liner vessels" (Onuenyenwa, 2011; Eru, 2018).

The total import cargo received at Warri port for the EGTL project was 1,138,352.02 freight tons, delivered by 141 chartered vessel calls. This volume amounted to 42.42% of total cumulative import cargo to Warri port for the period (2007 - 2013), including wet (petroleum) through the private jetties. It should be noted that, running the EGTL logistics safely through the port at that time also gave confidence to some importers, like Saipem project cargo for Southern Swamp Gas Gathering project located at Tunu, to use the port, thereby adding to the total volume. In 2009 when the EGTL project peaked, its contribution to total import cargo to Warri port was 84.05%.

We went further to analyze the impact of this volume contributed by EGTL on the port and its environs.

Infrastructural utilization grew steadily from 11% in 2007 to a peak of 74% in 2011, from where it started dropping, following the decline in project cargo importation, to 17% in 2014. By quantity, the EGTL project Logistics support led to the development of 22 new infrastructures measuring 29,280 m^2. This brought the total infrastructures from 36 (546,399 m^2) to 58 (838,479 m^2).

4.2.1Revenue Impact:

Naturally the handling of the import cargo translates to revenue for the major stakeholder companies which in turn paid employee compensation in the form of wages and salaries and earned proprietor income. These employees engaged in re-spending of their pay thereby producing wider induced impact in the economic region. They also paid taxes to the State government as personal income tax tagged Pay-As-You-Earn (PAYE). The project also paid Customs duties on the imported cargo, the value of which also had a multiplier effect in the economic region. Re-transportation of already Custom-cleared cargo from the Warri port to Escravos by barges (secondary logistics) is another sector that created jobs and revenue to indigenous marine equipment operators, thereby producing another round of impacts.

These impacts were analyzed using the IMPacts for PLANning (IMPLAN3) software model designed for the Nigerian economy, synchronizing data from the 2011 Nigerian economy's input-output table (Transaction matrix) and generated impacts as summarized in the table 4.1:

The most important thing to note here is the level of impacts created by this cargo volume. If 42.42% of cargo from a single activity of this nature can generate 46,310 jobs, and corresponding impacts as presented in the table 4.1, then we can imagine what will happen if the cargo volume into the port is increased by deliberate planning and sustained efforts to very high percentage.

V. Conclusion

The recurring congestion stretching from post-civil war period till date, experienced at the Lagos ports, if not checked promptly, could lead to dire economic and health consequences as huge amount of money is lost daily and traffic stress is taking great emotional toll on road users within the metropolis. On the other hand, the wastage and decadence of port facilities in notable ports such as Warri, Koko, Calabar, Port Harcourt and others, is saddening as it portrays Nigeria in very bad light to the international community which could see us as a country that builds white elephant projects without the ability to manage and sustain them.
Cargo Localization Policy, if enacted into law and operated as expounded in this paper, could check this symbiotic twin-menace and bring great relief and sanity to the Nigerian port system and its ancillary logistics activities.

5.1Recommendation
We therefore recommend that policy makers and stakeholders in the Nigerian port sector to adopt the cargo localization policy for port efficiency.

References

[1.] Economic Intelligence Unit, Ministry of Economic Planning and Budget: The Social - Economic Costs of Traffic Congestion in Lagos. *Working Paper series, July 2013.*

[2.] Eru, U.J. (2018): Economic Impacts of Logistical Support to the Escravos-Gas-To-Liquid Project on Warri Port and its Environs. PhD thesis submitted to The Federal University of Technology, Owerri, Nigeria.

[3.] Jaja, C. J. (2009): Port Development in Nigeria: trends and patterns. Transport Security 2009. http://dol.org/10.1007.

[4.] Ndikom. O.B.C. (2011): The Fundamentals of Freight Forwarding Management and Practice in Nigeria. *University of Ibadan Press, Ibadan*

[5.] Nigerian Ports Authority. Wikepedia, the free encyclopedia.

[6.] Okon, A. (2017): Apapa gridlock: Port Users'cost rises by 400%. *Punch Newspapers, July 31, 2017.*

[7.] Olorunpomi, G. (2010): How Lagosians lose N150b to traffic yearly. http://www.nigeriabestforum.com.

[8.] Oluwaseun O. (2005): Cement Amada of 1975. www.nairaland.com

[9.] Soyinka, W. (1996): The Nigerian Cement Scandal: The open sore of a continent: A personal Narrative of the Nigerian crisis. (New York: Oxford University Press, 1996. Page 79-81)

[10.] http://www.implan.com. Reference Manual.