

# **FRAUD AGAINST DEMOCRACY**

## **THE VENEZUELAN CASE**

**(Research into the qualitative fraud executed in the electoral process relating to the recall referendum of the mandate of Hugo Chávez Frías)**

**Caracas, October 15, 2004**

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## INTRODUCTION

The multidisciplinary team that was formed as a Committee to investigate the results of the recall referendum process of the mandate of Hugo Chávez Frías, which took place on August 15, 2004, presented a preliminary report, on September 8th, with two specific objectives: first, to counsel citizens on the institutional trap that manipulation of the results had produced and, second, in the face of the regional elections and other electoral processes, to alert them about the different mechanisms involved in the fraud, which could be, continuous, selective and massive and if not unveiled, would be repeated.

The objectives were achieved. At the moment of the presentation of this second report, in the timeframe within which we had agreed to present it, a general alert exists as a result of the verification of elements as serious as fraud and irregularities in the composition of the Electoral Registry, as well as evidently intentional failures in auditing and control mechanisms in the automated voting systems, interference with the transmission of data through telecommunications, vulnerability of the equipment and machines used in the process, abuse of power by the Government which has no scruples when it comes to using public resources to achieve electoral goals and, perhaps most seriously, the open willingness of the Electoral Board to violate all the legal regulations that establish the conditions for the process, thus placing themselves outside the Constitution and the rule of law.

These are the main reasons why the National Electoral Council lacks the capability, suitability and impartiality to organize any election. They failed, and lost the trust

of Venezuelans from the moment they presented a scheme for defining decisions that reflects the absolute and biased control of an institution that can have any defect, except the lack of credibility. They boasted of their arrogant intention to crush the opposition, to the point of refusing verification of the fundamental elements of the process and blocking the search for proof that legitimately corresponds to the participants.

The strategy of those who forged the manipulation of the popular will is self-evident: To lead the Opposition along the same path of irregularities and violations of Law that originated the fraud of August 15<sup>th</sup>, in order to validate, with participation in a regional process plagued by the same faults, a result that was immediately rejected by the representatives of the political parties that comprise and comprised the Democratic Coordinator. The paradox is that some of the leaders of those parties are today trying to impose a “participation at any cost” thesis, by justifying it with the argument of preserving “political spaces.” They most assuredly are also willing to blame anyone who is handy for the results of such a decision.

This aberrant discourse of “abstention” or “participation although reliable conditions do not exist”, is complemented by the intention of silencing any investigation with the plea that the fraud was not significant, or that it will generate a lack of interest among citizens disincentivating them from participating in future processes. It was those same individuals who now use these arguments who screamed “fraud” on the night of the election. Consequently, citizens have a genuine right to ask themselves: Did they lie to us at that moment? Or could it be that they are now motivated by interests different from those embraced by those of

us who fought to break the institutional trap that is drowning the democratic spirit of Venezuelans.

Hence, those that committed the fraud converge here with those in the Opposition who are breaking the popular will because they are not up to the current task and underestimate the maturity of Venezuelan society. When they hide the truth and divert attention from the true problem, they endanger not just an election but the democratic will of Venezuelans. It is not those of us who have unmasked the usurpers who are responsible for the lack of motivation of the population, but rather those who, while calling themselves leaders, have not known how to channel the democratic vigor of this society.

This time around the research allows us to make an additional contribution, because we present a political map of the fraud committed when we point out the impact of the manipulation of the electoral registry and the location of machines and centers in which, with the certainty derived from the methodology used, the intervention took place to revert the results. This instrument allows us to predict how and when the new fraud will be implemented.

Our effort has always been directed at defending the rights of the citizens and public freedom. We fight for a democratic and constitutional way out of the grave situation of institutional deterioration and perversion of the mechanisms of power that Venezuela is currently experiencing. It is the moment for taking a stand and this must be done based on knowledge of the facts, because the peace and harmony of a country cannot be built on a lie. Venezuelan society must look at itself and question the events that brought us to this barbarity. For a good

beginning it is indispensable to decipher the facts, to know the real potential of the opposing force and especially, to know the truth.

## I

### **THE PERVERSION OF THE ELECTORAL ARBITER AND THE OFFICIAL ABUSE OF POWER**

We contend that the Nacional Electoral Council has been kidnapped as an institution, and that in it there is no balanced representation, but rather a unilateral imposition of mechanisms that violate the axiomatic principles which are part of the Constitutional Rule of Law and the electoral processes in a democratic state. This statement is consistent with an institutional reality in which there is: “a lack of independence of the judicial power; limitations on freedom of speech; the deliberative state of the Armed Forces; the extreme degree of polarization of society; the actions of extermination groups; the limited credibility of control intuitions due to uncertainties over the constitutionality of their nominations and the partiality of their actions; the lack of coordination among security forces all indicative of a clear weakness in the fundamental pillars needed for the existence of the rule of law in a democratic system in the terms of the American convention,” as stated by the Inter-American Commission for Human Rights in its press communiqué N° 23/02 of May 10, 2002, issued at the end of the visit by Cesar Gaviria to our country in fulfillment of resolution CP/RES.811 (1315/02).

The illegitimacy of the National Electoral Council and the consequent lack of credibility are not recent. Prior to the electoral processes of 2000, those backing Hugo Chávez Frías proceeded to name, at their discretion, the members of the Electoral Board, with the backing of a provisional decision of the Constitutional

Hall of the Venezuelan Supreme Court of June 30, 2000, in which it declared that the Comisión Legislativa Nacional (sort of parliament named unilaterally by the dominating party in the Constituent Assembly) “will not have to abide by the provisions of the Constitution of the Bolivarian Republic of Venezuela ,” given that in that case, the appointment of the members of the Consejo Nacional Electoral was temporary in nature.” This decision falls within with the general scheme of setting aside the input of civil society when it comes to the selection of the members of the citizen and judicial powers (People’s Ombudsman and Prosecutor), and replacing it with the discretionarily of the only valid voice of the process, and violating the objective criteria that the Constitution of 1999 establishes as conditions for filling those positions.

The current Directors of the Consejo Nacional Electoral (CNE) represent the interests of Hugo Chavez Frías or of the Constitutional Hall of the Venezuelan Supreme Court; in the latter case, because they were appointed via a decision of August 4, 2003, instead of by using the procedure for selection that the Constitution establishes as being the competence of the National Assembly. Objectively, the executive responsibilities of that Board were elevated to the level of the Constitutional Hall, which at the moment of their swearing in had instructed them that “you are forbidden to "make mistakes.” It was the members of the Constitutional Hall who named them, and not the political parties via their representatives in the National Assembly. It is they then who are responsible for naming an Electoral Board that has devoted itself to the task of blocking the exercise of citizens’ rights and violating the constitutional norms for political participation.

This is the Board that is directly responsible for the following situations:

- ❑ The fraud, corruption and manipulation of the Electoral Roll.
- ❑ The purchase of an automated voting system in violation of the regulations established in Venezuelan legislation.
- ❑ That the software of the automated voting system was not updated according to the security norms that would have guaranteed their operation only by authorized personnel and the execution of adequate testing.
- ❑ That the design and operation of the voting stations did not fulfill the optimization criteria and which consequently subjected voters to the indignant attacks against their dignity so evident during the recall vote.
- ❑ That there was inadequate protection for the equipment to prevent the manipulation and alteration to which it was subjected.
- ❑ That the audits failed.
- ❑ That the process of returning all of the electoral material was not respected, nor where the ballot boxes and the cover forms protected during the ninety (90) days as established by law.
- ❑ The takeover of the facilities where the fundamental activities of the electoral process took place, forbidding the entrance of opposition members and easing the participation of pro-Government forces.
- ❑ That a fingerprint capture system was used for the purpose of identifying voters, in real time and controlling the flow of pro-Government/opposition voters by using the databases from both sides collected during the recall petitions.
- ❑ That the transmission of information and its processing was unreliable and was intervened via a number of covert centers established for that purpose.

- That there were no security procedures for access to the network.

Not satisfied with the advantage that was given to him by the absolute submissiveness of the electoral arbiter, from the structure directed by Hugo Chávez Frías, public resources and institutions that should be at the service of the Nation were used to determine the behavior of a population that every day is more dependent on the programs of the State, so as not to bear the brunt of unemployment and marginality. This crude abuse of power is combined with aggressions that violate all human rights, and ignore the legitimate power of State and local authorities whose actions and effectiveness are hampered by the retention of resources that correspond to them under the decentralization process and the Constitution.

It is not by chance that the first consequence of the manipulation of the results of the recall process of the mandate of Hugo Chávez Frías was the use of the Attorney General's office as an instrument of persecution of the political opposition, and the activation within the National Assembly by taking advantage of the irregularities in a set of regulations for internal debate approved against the principle of representation of minorities, of bills for Government laws geared towards limiting freedom of speech and the criminalization of political dissidence.

The Venezuelan political opposition deserves the same treatment that the CNE gave Hugo Chávez Frías when, from the city of Buenos Aires, Argentina, he affirmed that the signatures collected for the recall petition "were fake," and added that there would be no recall vote for one year in Venezuela, even though 3.236.320 Venezuelans had signed on August 20, 2003 to activate the recall vote. What we are



demanding is the verification of the facts denounced here and the fulfillment of the law.

At that time, the CNE not only listened to the chant of fraud, but acted in accordance by convening for November 28<sup>th</sup> a signature collection drive to trigger the presidential recall referendum, this time under its control. Not satisfied yet with the attitude of the CNE, Hugo Chávez Frías publicly declared the consummation of a “megafraud” against him, even before the electoral procedure had been completed and without awaiting for the Electoral Power to act. As predicted by him, there was no electoral vote that year because once the signatures had been submitted on December 19, 2003; the CNE deferred the signature verification process in violation of the same norms and regulations that they themselves had approved.

But perhaps the most underhanded abuse of power and violation of the fundamental rights of the citizens was the free utilization of the database of the CNE, which contained the names of the citizens that had activated the recall referendum of the mandate of Hugo Chávez Frías and the results of the revision of the signatures; names that were published on a web page of the CNE and were used as an objective instrument to determine the places where the CNE would selectively manipulate the automated system. We ratify that, with the simple data of the national ID card number, setting aside studies and research of trends and public opinion; they were able to determine the political map of the opposition at each voting center... The most horrifying aberration was the action that continues to be executed to this day, because after identifying the promoters of the recall vote they can be subjected to individual manipulation and extortion, and here we stress

the pressures exerted over certain sectors of the population, such as civil servants and any person that has relations or contracts with the State and wants to access public services.

These shameful acts for any democratic society have as their standard bearer a web page, backed and promoted by a Deputy to the National Assembly from Chavez's MVR party, Luis Tascon. This page is used by public institutions and other sectors to restrict the political rights of Venezuelans and engage in blackmail that we have referred to. This happens without the Attorney General, the People's Ombudsman or the Venezuelan Supreme Court taking any action with respect to the complaints that have been filed with them or by reason of the notoriety of the crimes committed that are typified in the Penal Code and the Special Law against Informatic Crimes. This last Bill, establishes the crime of violation of the privacy of the data or information of a personal nature, as set out in Article 20 in the following terms: "Any person who intentionally appropriates, uses, modifies or eliminates by any means, without the consent of the owner , the data or personal information of another person or over which he may have a legitimate interest, which are incorporated into a computer and system that utilizes information technology, shall be penalized by two to six years in prison and a fine of two hundred to six hundred tax units. The penalty will be incremented from one third to one half if as a consequence of the previously described acts described the owner of the data sustained damages or if the information was disclosed to a third party".

A similar attitude has been adopted by the Attorney General, specifically Isaias Rodriguez who claims to be the Attorney General, in the investigation against

Hugo Chávez Frías for the Oil Agreement with Cuba, or the illegitimate financing of his electoral campaign by the Banco Bilbao Vizcaya Argentaria. This latter case is paradigmatic since it was proven that there were two payments on December 1, 1998 and July 5, 1999 of \$525,000 and \$1,000,000, respectively, as a contribution to the electoral campaigns in which the Attorney General himself was a candidate for the Senate and the Constituent Assembly, as a representative of Chávez' MVR, prior to being named to the Public Ministry. From April 26, 2002, the date on which the first accusation was filed, to date the only result has been obstruction, negation of justice, and the "cooling" of the file in the safety deposit box of his office. This behavior contrasts with the speed and interest shown in bringing Miss María Corina Machado to trial and the harassment to which the Venezuelan opposition is conveniently subjected.

The behavior of the CNE has been marked by the overt 3 to 2 pro-government partiality, which is now a 4 to 0 ratio and surely tomorrow will be a 5 to 0 ratio, with which they will confiscate the will of the citizens, their free initiative and the principle of personalization and reserve of electoral acts. While on the one hand a representation of Governors and Mayors went to the headquarters of the Electoral Board and announced with joy the willingness of that Board as announced by the Director Jorge Rodríguez to abide by the law and purging in cleaning the electoral registry, on the other hand that same day, the voting notebooks were being printed using the contaminated registry, and the Electoral Council was defining the new voting centers, which coincidentally coincided with the interests of the Government that they be in locations where organizations and missions of those that support the Government habitually function.

## II

### **THE REPUBLIC PLAN AND THE ROLE OF THE ARMED FORCES**

It is fundamental to emphasize that Article 328 of the Constitution expressly establishes that the “Armed Forces essentially constitute an institution which is professional , without political affiliations, organized by the State to guarantee the independence and sovereignty of the Nation and to insure the integrity of its geographic physical space, using military defense, cooperation in maintaining internal order and the active participation in national development, according to the Constitution and the laws. In the fulfillment of its functions, it is exclusively at the service of the Nation and under no circumstances at the service of any person or political partiality. “The abuse of power on the part of Hugo Chávez Frías is a fact as he consistently takes advantage of the obligation of discipline, obedience and subordination of the members of the Armed Forces to scare the Opposition and the civil sector of society.

Perhaps one of the sorriest examples of this was the statement made on June 20, 2003 by General (Army) Jorge Luis Garcia Carneiro, then general Commander of the Army and current Minister of Defense. At that time, in an admissible interference and attempt to have the military arbitrate the development of democratic rights of Venezuelans, he publicly stated that the recall referendum of the Presidential mandate would not take place; moreover, he downplayed the importance of the Agreement signed to that end under the auspices of the **ORGANIZATION OF AMERICAN STATES AND THE UNITED NATIONS.**

It is not by chance that Hugo Chávez Frías, taking advantage of his address transmitted from the Guaiacaipuro Fort on the occasion of the 314th Anniversary of

the Artillery Group of the Ayacucho campaign, invited the Armed Forces to defend the privileges of power attained during his regime, and not to acknowledge any referendum that would attempt to expel him from the Government, while at the same time he threatened that if it were to become necessary, he they would use weapons against the population and rejected any form of international action should this occur, particularly that of the **ORGANIZATION OF AMERICAN STATES, OAS**. Additionally on September 2, 2003, he manifested from Cuba that if the CNE validated the signatures to have a recall referendum against his mandate, it would be morally disqualified from organizing any electoral process. This use of the Armed Forces as an instrument of party activism acquires the appearance of extreme seriousness because of the direct intervention of the military in all of the elements of the recall process. The Republic Plan presupposed an effort aimed at controlling and monitoring electoral centers, transporting material and machines, and evaluating threats and risks during the process. Given that responsibility the Armed Forces must answer the following questions posed by citizens:

- What security violations of the electronic, informatics and telecommunications system were detected during the day of the recall referendum?
- Did the Republic Plan maintain a presence in the computer room of the CNE, in the alternate room located in the Banesco tower, in the Bolivarian University or in any other transmission center?
- Did military personnel operate equipment belonging to the CNE system, or was there a center for interception of data in any military installations?

- What interaction was there between the National Defense Communications system and the System for Communications and Transmission of Radioelectric Emissions, which are dependencies of the Ministry of Defense, and the network integrated by the CNE?
- What is the current status of the electoral material that is under the custody of the Armed Forces, especially the ballot boxes, in view of the 90-day period after the electoral event during which it is obligatory to protect the elements of the process has not yet elapsed?
- Who authorized and directed the reserve forces intervene actively and militantly during the entire electoral process

An election is a civic act by nature, a citizen's day that cannot be subjected to interference or intervention of competing elements in the process. In no country anywhere in the world is a day like this subjected to the exhaustive control of the military, and least of all do all of the stages of an electoral process depend on its presence. In those countries in which a military party exists which exercises power and that intervenes in the decision making of fundamental policies, there are no elections in the material sense of the word but rather simulations that hide or mask the authoritarian reality. The next process which is the election of Mayors and Governors will be marked by the massive participation of candidates with military backgrounds. This is an event unprecedented in the democratic history of our country and requires that participation by the Armed Forces in all stages of the process, much like what happened in the recall referendum, be the subject of profound analysis and revision.

### III

## THE IMPACT OF THE FRUAD IN THE ELECTORAL REGISTRY

In the preliminary report we emphasized the problems of identification and manipulation of the Electoral Registry as a fundamental element of the qualitative fraud that took place on the occasion of the recall referendum of the mandate of Hugo Chávez Frías. We pointed out that the numerical patterns of production of national ID cards per year were within the normal range of increase, in keeping with the production capacity of the offices that issue such IDs and the laboratory of that department, and that we were unable to find any numerically appreciable jumps from one year to the next, until the point when the decision to hold the recall referendum was made.

From the time of that report, multiple elements have been produced that prove and allow us to confirm that the “Plan de Cedulación de venezolanos y extranjeros” (Plan of identification of Venezuelans and foreigners), without fulfilling the mandatory technical security requirements for these types of documents, absolutely distorted the Electoral Registry and that, for the upcoming elections of Governors and mayors and parliamentary elections, this situation has been aggravated by the inclusion of thousands of new voters under similar conditions. We refer to that preliminary report to ratify that this was a planned action and that it included among other elements: a) The elimination of the control function of the General Control Unit; b) the naming of a militant of the official party as Head of that Office; c) the diminishing of the attributes of the National Office for Supervision of the Civil and Identification Registry (ONSRCI); d) the activation of the “Identity Mission” on April 9, 2004, and e) the issuing of the Regulations for the Regularization and Naturalization of Foreigners living in the

national territory, published in Official Gazette N° 37.871, of February 3, 2004, by means of which a massive process was carried out to give Venezuelan nationality to foreigners illegally in the country, thereby granting them, in discretionary fashion, the status of residents and voters, after registering them in the Electoral Registry.

As regards registration in the Electoral Registry, in those centers where IDs were being issued, the strict and traditional standards of control and processing were not followed, giving precedence to quantity over quality. That is how in only four months the registry increased by 1.8 million voters and 1.1 million voters were reassigned. With extremely low data transcription quality the consequence was disorder, improvisation, delays and the correction of errors up to one day before the recall referendum. But it also allowed the Government to register a determining number of voters that either do not exist or persons without the right to vote, and to direct those voters to preselected voting centers. With the same goal, the data of deceased citizens was manipulated and a many Venezuelans who were eligible to vote were excluded for having signed the petition to have a recall referendum against the mandate of Hugo Chávez Frías. It is a proven fact, based on the verification of the migrations detected with the help of candidates, mayors, governors, neighborhood associations and the civil society, that an inordinately large percentage of new registered voters were conveniently assigned to rural areas or non-consolidated urban areas that had manual voting centers.

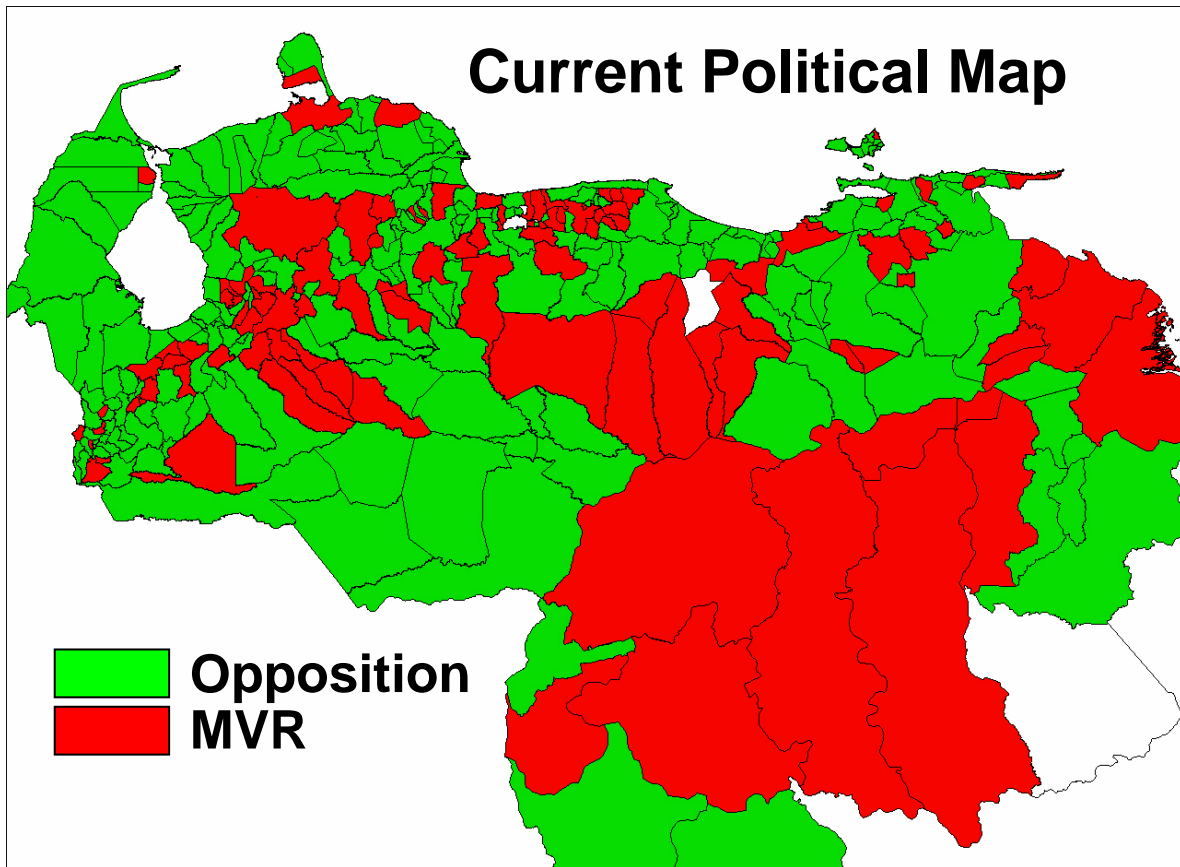
In the case of small municipalities (rural and intermediate), relocations have been reported that reached significant percentages of the electoral population of the municipality. The objective of these mechanisms was to control the vote and to try



to obtain a result favorable for the Government that would for now justify the automated results,<sup>1</sup> in the recall referendum, but with a view toward the regional elections, the purpose being to ensure government victory in small municipalities and locations controlled by the opposition. Thus, the impact of just this fraud in the Electoral Registry and the migrations, if these defects are not corrected, would produce an electoral defeat in one hundred and six mayoralties (106), which are distributed in the following way: a) A.D. fifty four (54); b) COPEI twenty one (21); c) MAS five (5); d) Other political parties twenty six (26). We annex in the technical report the list of these cities and towns, State by State, and here we show the maps of the current political situation and that expected from the manipulation of the electoral registry alone.

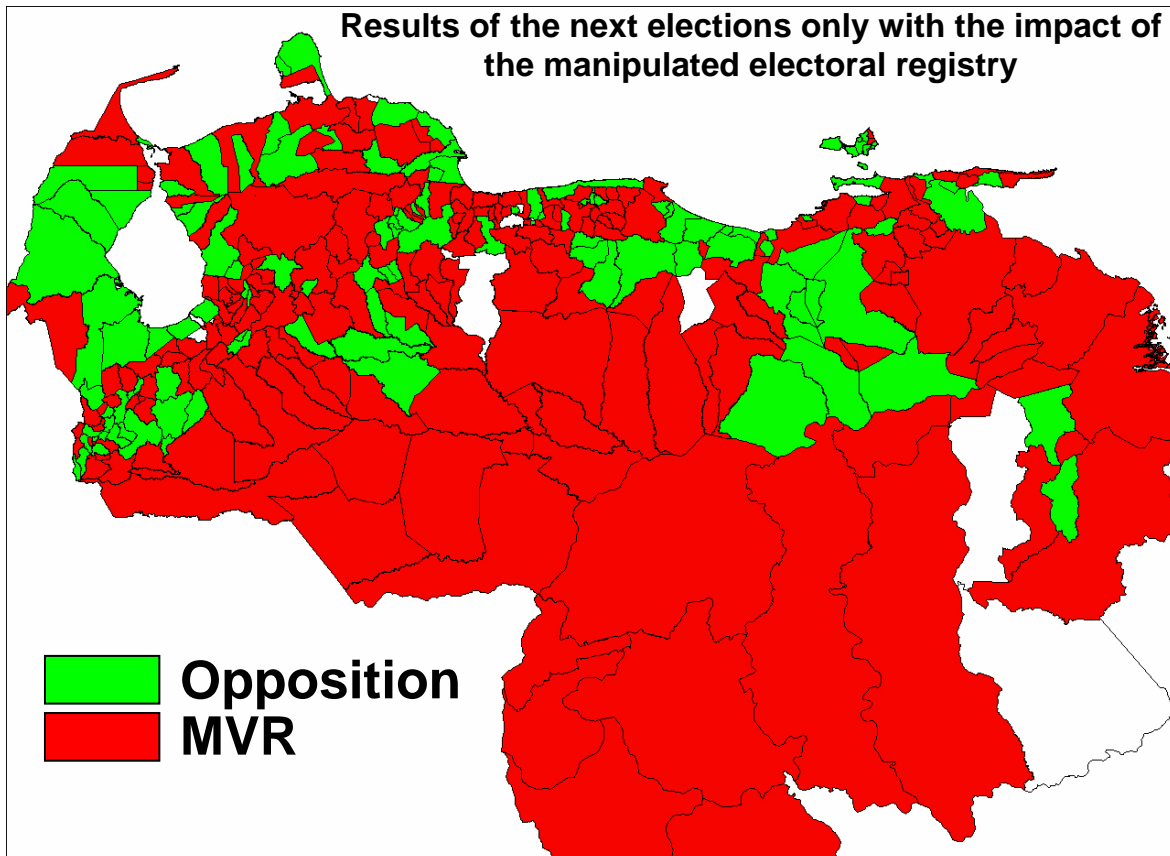
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<sup>1</sup> The automated vote could only be credible as long as the manual voting centres were similar, and this only if it was possible to mobilize an important amount of voters in order to alter the expected behavior of these centers.



The way in which the identification and registry systems were fraudulently manipulated generated a disproportionate ratio of voters to inhabitants, compelling CNE Director, Jorge Rodriguez, to acknowledge that such a situation - in which there are more voters than inhabitants - existed in at least twenty-nine parishes in the country. In conclusion, besides the institutional damage and impairment of democratic legitimacy, the fraud distorted and perverted the statistics and registries of this country. It would thus be a mistake by any Democrat to ratify this aberration by participating in illegal and perverted elections, due to the violation of Article 119 of the Organic Law of Suffrage and Participation that expressly establishes that “for each election, the current Electoral Registry will be

closed ninety days before the date on which the elections or the referendum takes place.



#### IV

### THE FAILURE OF THE AUDIT OF THE AUTOMATED VOTING SYSTEM

The initial scope of any audit task on an automated voting system should necessarily be directed to identifying the existing risks in the mechanisms for voting purchased by the CNE from Smartmatic. Moreover, it would include the

development and execution of an audit plan, after the vote, to determine the adequacy of the established controls to record and report the will of the voters.

The relationship of facts that we present here has been documented.<sup>2</sup> On June 14, 2004, a group of professional specialist in security and control of automated processes gave a presentation to representatives from the Coordinadora Democrática (CD), in which they showed the risks in each of the stages of the automated processes for voting that was to take place on August 15<sup>th</sup>. In this presentation they manifested the inconvenience of going to a recall process with an unproven technology, in addition to describing the diverse modalities that could affect the electoral process or the counting of the will of the electors. This would be the genesis of the group that designed and developed a work plan and letter of requirements addressed to CNE authorities.

In the mock election that took place on July 18<sup>th</sup> in various voting centers of the capital region, specifically in one that took place at Liceo Andrés Bello, measurements were made and the delay in capturing the fingerprint was detected (one minute and thirty second per voter, without considering data transmission), as well as of the voting process (15 minutes per person). At the close of the mock election, in an event that took place at the Hilton Hotel, it was evident that the system allowed the user to maintain his session active for more than one minute, since the time counter would reinitiate itself anytime the user pressed any of the buttons other than the "VOTE" button. The conclusion of the specialists was that the fingerprint capturing system was incompatible and unnecessary for the upcoming electoral process and that it would have a great impact on voting time.

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<sup>2</sup> Verify reports and minutes in technical annex that is in integral part of this report.

On July 19<sup>th</sup>, the CD technical team held a first meeting with Cesar Alvarado, the person designated by director Jorge Rodriguez to coordinate the meetings between the grupo Maisanta (Chávez's campaign command) and to collaborate in the efforts to audit the system. On July 22<sup>nd</sup>, the first meeting of the group took place with a group of consultants from the CNE, a meeting the grupo Maisanta did not attend. At that meeting the need was defined for a comprehensive audit, that is a pre-vote and post-vote audit, to which the consultants of the CNE (Luis Merchan, Héctor Arciniaga, Rafael Pastoriza y Eliécer Correa) replied that they would not allow a review of the voting machines or of the software, since there was not enough time. They indicated that they had certified the software, as regards the evaluation of the process and the voting machines, which had taken them two months of work.

It is important to note that it is not appropriate that members of the CNE work team had, at the same time, prepared, adjusted and certified the software. Given such a situation, the results could not be trusted and the system should be audited once its configuration was concluded. The answer to this proposal by the CD was that the CNE was not contemplating an audit pre-vote. As of that moment a team of audit members composed of members of the CD and the Comando Maisanta was created and they were duly accredited.

On July 29<sup>th</sup>, there was a meeting in which representatives of the CD and the Comando Maisanta agreed to select a member for each side to define which type of sample of voting centers (stratified/general) would be audited, size of the sample and the methodology for their selection. In diverse and subsequent meeting, the topic of transmissions was discussed, because starting them without previously

printing the results for each voting machine was in violation of the Organic Law for Suffrage and Political Participation. When the technical reasons for this vulnerability were explained, it was the members of the Comando Maisanta who proposed a procedure consisting of printing, transmission and then printing again. In a later meeting, they informed us that that they had received instructions that there would be transmission first and then printing, without giving a technical justification for this position.

On August 2, 2004 there was a meeting between CEN Directors Jorge Rodríguez, Ezequiel Zamora and the group of negotiators from the CD. The former informed us that the audit team had been organized and there would be a trial run on August 8<sup>th</sup> and that the CD was invited to it as an observer, but without participating in the planning or execution of the tests. There was some resistance on the part of the audit technical team to participate in this trial run under those conditions.

On Saturday August 7<sup>th</sup>, the CD and the Comando Maisanta were invited to observe the change in date in the voting machines that were going to be audited the next day. By that date most of the voting machines had already been distributed among the regions, which is why we asked CNE authorities about the mechanism for the random selection of the voting machines for the trial run. The answer was that the selection was made by the Republic Plan. As the soldiers were loading them they would randomly set some aside, and the employees of AEROCAV also helped.

On Sunday August 8th there was a meeting at the facilities in Filas de Mariche with CNE representatives, the Comando Maisanta, the OAS observers, the Carter Center and the CD to begin the trial run of the voting process. During the simulation process, it was noted that we had never received any proof of the software certification processes performed by the CNE consulting team nor of the signatures generated (HASH) guaranteed by that group. In this regard, the Smartmatic personnel stated that they would hand over that information during the day. At the end of the morning they allowed one member of the audit from the CD to be present at a presentation of the scheme used to determine the integrity of the software in the machine. It was evident from this presentation that the scheme used had faults and that in order to omit these errors from the report that had to be issued for the integrity tests, they had omitted the evaluation of twenty five files whose HASH did not coincide.

During the tests of the voting machines, on direct orders of the military personnel that were guarding the area, the members of the CD, OAS and Carter Center were not allowed to get close to the machines, since they were there only observers. It is important to clarify that the results of the audit were never presented.

There is a report prepared by the audit team and given to the CD one weekly after the process, in which the weaknesses observed in the system are noted as well as failures in compliance by the CNE. Among other things, we wish to point out that no prior audit was performed and that they would only be able to count on the 'hot audit' planned for the day of the vote. The same report drew attention to and stressed the warning regarding the portion of the Regulations of the Recall Referendum which determined that only one ballot box would be placed per table and not per machine, since this would contravene the law and would affect the

counting, in the event a switch had to be made to a manual process if any of the machines failed. This would make the 'hot audit' difficult as it required the counting of all of the voting machines that issued ballots for that ballot box, a situation not contemplated in the regulations.

On Friday August 13<sup>th</sup>, the technical team of the CD had a meeting with Smartmatic, represented by Ing. José Antonio Madriz, confirming a series of changes to the original software required by the CNE. The day prior to the recall vote, there was a meeting at the Informatics Offices of the CNE, with the presence of Comando Maisanta, the technical team of the CD and the Electoral Board in order to define the plan for executing the audit the same day as the election. One of the relevant topics at the meeting concerned the definition of the municipalities in which the audit would take place, which suggested that the selection of voting centers for the audit would not take place over the entire universe of machines. They also informed us that the presence of the CD at the audits would only be as observers and that the day of the election, at 3 p.m.; there would be a meeting with Professor Héctor Arciniaga to review the source code program, together with the OAS and the Carter Center.

The day of the recall referendum access was denied to the representatives of the CD to the machine room at the CNE, as well as the alternate center, despite having credentials and despite this having been agreed to previously. Similarly, the meeting that had been agreed to in order to review the source code program for the random selection for the 'hot audit' never took place. At 5:00 p.m., the CNE invited the audit team of the CD, the Comando Maisanta and international observers to be present at the running of the program to select the voting centers.



In reply to the concern expressed by the audit team of the CD for not having reviewed the source code program, we were informed in the middle of the session that they would hand out at that very moment the source code program, the input program and the list of tables selected to be audited. This never took place.

The draw of the voting machines to be audited took place with a program and a machine from the CNE, only in twenty municipalities in fourteen states. These states were selected unilaterally by the CNE. The credentials of the witnesses for the audit from the CD were handed out at the event and, when the concern was voiced that the credentials might not reach all auditors at such a late hour, Mr. Leonardo Hernández, representing the CNE, assured us that in the regional offices they would be given copies of the credentials. Midnight arrived and in all regions the complaint was the same: handing out the credentials was being denied as well as access to the centers.

When the way in which the fundamental elements of the recall process were protected is analyzed, one concludes that the audits and controls after the vote were insufficient and irrelevant and, additionally, the object of manipulation. In the preliminary report, we affirmed that the way of protecting and taking care of the elements of the process, in which the opposition was absolutely absent, practically guaranteed the alteration of the program. Given such a grave statement, one cannot speak of an international observation that acted in an integral and effective way.

In its zigzagging position and statements, the Carter Center has evidenced that it did not perform an observation compatible with its capacity as guarantor of the

May Agreements and the expectations that it awoke in Venezuelan society with respect to the seriousness of its acts. Just as the Center affirms that the Venezuelan electoral power had limited the observation tasks of international observers, but that finally it had authorized the entrance of observers of the Center “to many of the technical components involved in the election”; just as the Center rushed to recognize the totalization executed by the same Electoral Board, in its recent “Executive Summary,” the only thing the Center has done is to confirm the lack of credibility of the CNE, the institutional trap and the abuse of power that the opposition suffered during the recall process and, why not, the Center also acknowledges its inability to intervene in automated electoral processes.

We reached the preceding conclusion, because as we indicated in the preliminary report, the international observation by the Carter center was characterized by severe limitations, besides being subject to an expeditious and rushed evaluation. As a result of their “Executive Summary” they seem to have acknowledged the control exerted by the Government over most of the Electoral directors and the handicap of an opposition which is denied the minimum elements to defend its right to participate politically, when the Center affirms that the process was “affected by some irregularities, delays, politization and intimidation,” and a “marked tendency for lack of transparency” that also accompanied the general decision making of the Electoral power. The “most controversial decisions, in particular those that favored the government, were made by a 3-2 vote, not finding evidence of a single occasion of a decision favoring the opposition with a divided vote of 3 against 2”.

The Carter Center did not attribute value to the fact that pro-Government director Jorge Rodríguez imposed the prior selection of States and municipalities in which the random sample of machines and ballot boxes would take place, as well as the corresponding audits, or that of the one hundred and ninety nine machines selected through the application of a source code program elaborated, unilaterally, by the teams of the pro-Government Director , the opposition was only allowed, at the last minute and overcoming the obstacles of accreditation imposed by the same Electoral power and the Armed forces, to be present at twenty-seven audits, representative of the electoral jurisdictions with the largest populations of the country. It should be noted, as was done in the preliminary report, that the results of this revision, even though partial and manipulated by the Electoral power, yielded a result favorable to the opposition by sixty-two percent of the votes cast, as it is shown in the technical report from the audit annexed to the technical report. It is thus that Carter, on the basis of a simple count of electronic results, immediately declared the victory of Hugo Chávez Frías.

The “observation” by the Carter Center was insufficient, superficial and irresponsible, in that it unilaterally reached an agreement with Director Jorge Rodríguez regarding the terms of the audit that took place on August 18th, insuring that the source program for the random selection of the ballot boxes that were in the custody of the military would be under his control. Such was not the case because the program provided by the Center itself was not used, with the argument being that it failed for technical reasons and they proceeded to use the same program that had been objected by the opposition and used for the frustrated ‘hot audit’ on August 15<sup>th</sup>. This situation can be checked in the joint report signed by the Carter Center and the OAS, as well as the fact that the “sample was

generated by the CNE personnel” and that the members of the observation team of the Carter Center “slept” next to the ballot boxes to prevent the selected boxes from being violated. They said nothing about what may have happened from august 16<sup>th</sup> to 19<sup>th</sup>, a period in which the ballot boxes were under the custody of the men from the military, because all of the elements of an eminently civic process were controlled, in all its stages, by the military.

## V

### **THE MACHINES OFFERED BY SMATMATIC**

The configuration of the MAEL terminal 205 was manufactured by Olivetti as a means of negotiating and selling lottery tickets. Such a fact which has not been the subject of discussion and can be verified in the official publications of the Italian company, implies a security system different to what must be used in electoral processes and, for that reason, such systems are inadequate. The substantial difference is that, in a lottery, the equipment needs to be connected permanently to the network administered by a central server, while a voting machine, conceived of as an individual terminal, exists independent of the rest of the terminals in the network... The possibility of interconnection constitutes an imminent risk of manipulation, which is why there should not be a link until the event is over.

This is why the Organic Law of Suffrage and Participation establishes in its Article 157 that “in the cases in which mechanical voting systems are adopted, it should be guaranteed that data will only be transmitted once the act of counting has concluded.” A terminal connected to a network is susceptible to manipulation and is exposed to external attacks. The connection to the server is for the purpose of

control, as in the case of the sale of a lottery ticket, which is incompatible with the basic principles such as the secrecy of the vote and the impossibility of monitoring the trends of the voting.

The model offered by Smartmatic is not compatible with the possibilities of complex electoral systems, such as the regional elections of Venezuela,<sup>3</sup> since its small dimension is designed to allow installation in sales points that are reduced in size, in contrast to the spacious locations of electoral events. Thus it becomes elementary that the design of the screen makes the functioning of the terminal as a voting machine more difficult if pictures and symbols of the candidates, logos of the movements and parties that back a candidate have to appear on the ballot, according to the sole paragraph of article 153 of the Electoral Law, which stipulates that 'the national electoral council, for the purpose of simplifying the instruments of voting, once the opinion of the national political organizations has been heard, may determine the design of the machines by allowing the simple mention of the first and last names of the uninominal candidates to the positions being elected by popular vote, and his picture and the political parties or groups of electors that are backing him"<sup>4</sup>

The solution that Smartmatic presented was to add a touch screen in the form of a ballot with different alternatives, which adds more vulnerability to the machine that will function as a system of membranes, so that if any of them breaks, this

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<sup>3</sup> In elections of this type with numerous candidates they appear proposed by their own initiative, groups of electors, or political parties for different positions of popular elections distributed in regional, municipal and uninominal circuits, besides they integrate possibilities of uninominality or lists. In this way, in an election of the regional type, in the metropolitan area of Caracas, an elector chooses a metropolitan mayor, metropolitan city councilmen by lists or uninominally. Governor of Miranda status, deputies to the legislative council uninominally or by lists and mayor of the municipality in which he lives.

<sup>4</sup> The voting machine screen, LCD TFT, is 12 inches, black and white, with a maximum resolution of 240 X 64 graphic points and a maximum pixel resolution of 800 X 600.

would stop the process completely. If to this you add the inability for storing information, since the MAEL 205 does not appear to have the characteristics that would allow a security copy, the conclusion is that Smartmatic cannot guarantee the inviolability of the system or the possibility that, in the case of the occurrence of fortuitous events, the electoral information can be extracted without being modified. This is especially relevant as the machine does not have a power source of long duration that can make it autonomous from the electrical connection, which is why, in the event of power shortages in the facility or in the voting center, they would disqualify them and eventually could not conclude the electoral day.

This type of machine must be activated by an operator or a table member who, due to that circumstance, has control over the final result since he has access to multiple activation. The voting machines, at the end of the day, first transmitted what was supposedly 'stored' in an intelligent card called a smartcard, and later would issue a receipt with the totals. In that fashion there would be three points of coincidence; the printed paper, the smartcard and the totalization center of the CNE.

The Olivetti "gaming ware" (game machines) are not designed for any kind of election where confidentiality and anonymity are the main characteristics. The Hardware and the Software, as is explained by Olivetti in its presentation, are designed to work "on line in real time". In its presentation they utilize them for BIDIRECTIONAL platforms, with leading edge technology utilized to be intervened and used in games with direct bets or sports events, via the telephone, cell phones and even the Internet. It is an open system for easy intervention. When

there is connectivity you obviously share the data. Just as there are honest executable codes, there are also criminal codes used by operators without scruples.

Each machine, besides its identification code, has an IP address (that is an exact address or the equivalent of a telephone number) which corresponds to a specific voting machine point and there are as many arrival IP numbers as machines, in accordance with the trajectory and the points wherever the information travels. They are links of communication in a high speed network. The layer of access to the network is responsible for placing the packets, and must be independent of the method of access, format and plot. With the IP numbers the packets could be routed, defragmented, rerouted and assembled, which allowed us to reach the origin of the data

When a signal is sent via a router, when it reaches the end by bouncing it produces an echo (ping) that is not lost and you examine the route to the destination via the tracer. It even lets you know where the connectivity stopped, knowing beforehand the end points. The IP numbers of the public and private entities related with the system (Capacity of processing) are the following:

a) CONSEJO NACIONAL ELECTORAL IP 200.70. XXXX; b) C.A.N.T.V. IP 200.44.32.XX; c) BIBLIOTECA NACIONAL IP 200.90.17.67 y d) UNIVERSIDAD BOLIVARIANA IP 192.164.XX.XX (Old LAGOVEN building, Bello Monte). This gives an idea of the strength that interconnection has among systems and the weakness as regards to access, to make the transmission reliable.

In the recall referendum those that executed the fraud controlled both external and internal devices in a closed loop, they were managed with monitoring (TCP/IP: they took part of the message when it was transmitted), and the privacy of the data vanished. They had reports and stats in real time as the recall process took place, and here they used the fingerprint machines too. These machines were negotiated directly by Jorge Rodriguez, as it is stated in Memorandum ORP-101/2004 addressed to William Pacheco in his capacity as secretary general of the CNE, with Cogent Systems and Gilat Satellite Network for "An automated identification system for the authentication of fingerprints via satellite" aimed to be used, in principle, in twelve thousand fingerprint reading machines and the mechanisms for transmission by satellite during the recall referendum.

As to the encryption of the information, when you work with MICROSOFT under SQL (Structure Query Language), there is an authentication of the origin of the data, which is what allowed the data in its original form not to be changed (the transmitted data) and to be followed in the farm sever. There should have been confidentiality in the flow of limited traffic and the election of a method of authentication (preshared password). Among whom? The answer is simple, among themselves, the selling company had the ciphered passwords but due to the flaws in the system when it echoes, it was possible to track the authentic and true information.

How do you check the data (votes) was different from the printout that the voting machine issued? The access and external tracking through the IP numbers of the security server of CANTV allows us to analyze study and disassemble the sequence and content of the transmission. Explaining it from machine language is



complicated. In principle, a transmission log (registry) is where you observe the exit point of the terminal (voting machine) and the arrival at the security server (not the totalization one), that is, the pure data of each machine is preserved by its own nature in the servers HP, IBM. From there comes the analysis of the data (votes) in time and configuration.

The electronic addresses of the machines had the following identifiers: a) the first two digits were the state. For example, 14 was Bolivar state and 11 is the Libertador Municipality. (They had a number for the number of grouped centers); b) the next digit is the parish; c) The next one is the physical location; and d) the final number is the table. The scale of values for the voter is discriminated according to his national ID number, that is, a center had a number of tables and each table had a number of voting machines. The information presented by the CNE is for the tables and one has the coded votes for each machine.

Another point that should be emphasized is that the source code<sup>5</sup> was under the control of the CNE, as is established in the original agreement, and by Smartmatic. Because of this, you could load external modules (compiled programs that were not self executables) and from there load specific instructions that would alter the original function of the running program. The source code could not have external modules because of the nature of the process. The opposition did not have access to the source code (see and don't touch), which was one of the "necessities to guarantee the purity of the process. The code had to be accessible, auditable, and verifiable, thus if the system were open code it would have to be visible, a sort of

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<sup>5</sup> It is defined as the original programming language "high level instructions" whose function is in this case the confidential and transparent totalization, the code was compiled (converted to machine language) and became an executable (.exe).

virtual count and the voters would have had the security that the software “did what you expected it to do”. The system had a “back door” without authorized privileges, which easily allowed the inclusion of additional votes or the exclusion of existing votes.

One can decipher each point, each trajectory, each language, and the footprints that always leave information when they flow. According to this, there were clear mechanisms to alter the source code, the trajectory and time of the information, the data of the servers from which the change of the results follows.

## VI

### **THE DETECTION OF THE AFFECTED CENTERS AND THE POLITICAL MAP OF THE FRAUD**

Faced with the evidence of massive and qualitative fraud and the corruption of the Electoral Registry and the automated fraud, it is up to us to determine which the centers that were undoubtedly affected were and according to established methodology. The objective was very simple , determine the scope and definition of the social engineering study basis for the manipulation of the perpetrators of the fraud, in which we can delineate the sectors in which they could manipulate popular will with impunity, to define the trends and, at the same time, to avoid future manipulations. Just as affected centers may be detected, with the same methodology one can detect those that were not, in order to determine what the real results of that day were.

Both objectives are determinant to define the political future of the democratic opposition. Thus we constructed interdisciplinary teams whose unanimous conclusion, from different scientific perspectives, was that there had been a massive manipulation of the results that was evident from the data officially announced by the CNE. Simply put, we worked based on the official results and allowed the numbers to speak for themselves.

The second action was the definition, isolated and independent, of the universe of centers where, with scientific certainty, manipulations were or not produced, setting aside those centers in which all the members of the teams did not agree unanimously. In the case of the affected centers, we took two actions; the first one was to draw the political map of the fraud, the other one was to cross these indubitable data with those centers that had anomalous behavior with respect to telecommunications, as can be checked in the technical appendices to this report.

#### **DATA ANALYZED**

1. Official as provided by the CNE  
Total Votes: 9.815.631  
NO: 5.800.629, SI: 3.989.008, VOID: 25.994
2. Municipalities: 335 (Foreign vote must be included-62)  
Average parishes x Municipality: 3,1  
Average Votes x Municipality: 24.725
3. Parishes: 1.228 (96 centers abroad have to be included)  
Average centers x Parish: 6,8  
Average votes x Parrish: 7.993
4. Voting centers: 8.335  
Average cover sheets x Center: 2,8  
Average votes x Center: 1.178
5. tables: 12.274  
Average cover sheets x table: 1,9

Average Votes x Table: 800  
 6. Cover sheets: 23.681  
 7. Average votes x cover sheet: 414

The CNE declared that 59% of the voters had voted in favor of the permanence of the President of the republic in his position (No votes) and 41% of the voters had voted in favor of revoking his mandate (Yes votes). In the studies we use the official data published by the CNE in 23.681 cover sheets, distributed in 8.335 voting centers, belonging to 1.228 parishes.

The conclusions of the study, carried out in three phases according to its objective and the methodology used, in which we aimed to obtain the largest reliability in results, appear below.

1. Phase 1: when one compares the patterns of votes in the same centers within the same parish, one observes 48% of irregular cover sheets. However, only 1% of the irregularities are at the level of the same center.
2. Phase 2: One can state that the interval of cover sheets with irregular pattern of voting is from 5.450 to 6.050 with probability  $(1 - 10^{-6})$ ; that is between 23 % and 25,5 % of the total number of voting centers.
3. Phase 3: One can state that 18% of the voting centers present a pattern of irregular voting in their cover sheets. (*Details of the Recall Referendum: Statistical Analysis, Annex 1*). The votes related to this irregularity are in the order of 2.550.000 and are mostly related to the No option in the recall referendum.
4. Phase 4: When we estimate the percentage of votes obtained by the Si (Yes) option in the referendum, as a function of the representative population and the results by the type of cover sheet, we conclude that the same is contained between 52.2% and 59.7%.

The results of the analyses at the level of entity (parish, voting centers) and the magnitude of the irregularities imply that the official results do not reflect the statistical certainty of the vote intention of the electors. The observed irregularities are observed uniformly in many voting centers.

What is fundamental in the work executed is that this trial coincides with that of the work groups from the universities, which independently worked according to the methodology that will be pointed out in the next segment of the present report. We discovered the electoral centers and machine that were manipulated to cross correlate them in such a way that they coincide unanimously between teams. At the same time, such a universe was crossed with the machines that had bidirectional and irregular behavior and as we indicated, they coincide. In this manner, the impact and location of the automated fraud was located.

## **VI**

### **CALL FOR UNIVERSITY TEAMS AND THEIR CONTRIBUTIONS**

The following is a synopsis of the report on the Statistical analysis of the results of the Recall Referendum 2004 performed by university professors from well-known national and international universities, as well as well renowned independent professionals invited by the Technical Committee for Substantiation to debate the results, and on the basis of an effort by the society of knowledge, to arrive at conclusions about the veracity of the results.

The application of Benford's Law, a technique used in the detection of possible financial, census and other types of fraud, gave results that show the CNE data

presents strong evidence of fraud. On the other hand, they studied the so-called numerical repetitions (incorrectly called caps) to conclude that the repetitions of the SI (Yes) have a very low probability of occurrence, but what is most important is that they found the repetitions in centers with four voting machines that have probabilities that are essentially zero. A similar conclusion was reached with respect to the repetitions of the number of Si (Yes) votes in centers with six machines. This finding, by itself, questions the honesty of the data of the CNE.

The above data corresponds to studies of the official data of the CNE; nevertheless, the committee opted also to do studies by states and parishes. At the level of states it found that that in many of them, generally those with the most voters, the patterns of the vote corresponded to a theoretical vote expected for a vote for two options. In addition, the 2004 election was compared with the 2000 election and a great similarity was found between the percentages of the votes. We should recall that in 2000, despite the high degree of polarization, in various states some of the additional options have some significance. Since the same pattern of voting from the presidential election of 2000 was maintained, in 2004 characteristics appeared that are foreign to a vote between two options, which once again is evidence for the presence of fraud. In this way we identified patterns that are not expected in the states with the largest number of voters, which led the teams to conclude that the manipulations were carried out in selective fashion. The study at the level of the parishes led us to subdivide them into more homogenous sectors, with the aim of determining irregular behavior in a given sector. The result showed that close to 2,500,000 votes, at the national level, belonged to irregular cover sheets.

This Committee has maintained that only an audit that had taken place immediately after the close of the voting would have made sense as an element of validation of the electoral results. Nevertheless, the university team determined in various ways that the sample used on August 18th was not representative of the votes issued during the voting process. Various characteristics of the sample do not coincide with the values corresponding to the universe, as for example the distribution of the audited machines by social strata, the behavior of Benford's Law for the NO or the relationship between the signatures of the Reafirmazo and the SI votes.

An estimate was made of the automated vote. To that end, we first determined the proportion of Si votes in the group of cover sheets that show the most regularity with respect to the center they belong to. This group is composed of 795 centers distributed throughout the whole country with a total of 1.654.544 votes. According to the CNE, for these cover sheets the resulting proportions are:

SI Votes .....59,7%  
 No Votes.....40,3%

The votes projected at the national level would give the following results for the automated voting:

SI Votes..... 5.078.000  
 NO Votes.....3.427.860

In another study based on Benford's law, it was estimated that a minimum of 1,390,000 votes needed to be translated from the NO to the SI in the official results of the CNE. This results in the following estimated percentages for both the manual and automated votes.

:

SI Vote..... 5.379.008.....54,8%

NO Votes.....4.436.623.....45,2%

Of the statistical analysis mentioned above, we conclude that the results published by the CNE do not correspond with the vote intention of the electors. With respect to the audited sample of August 18, 2004 it is proven that this is not representative of the universe of voting machines. The estimate of unmanipulated Si votes point to a real results of the vote which is the opposite of that announced officially by the CNE.

## VII TELECOMUNICACIONES

An automated voting system contains the following components: (a) the application, responsible for the treatment of the data generated by the voting machines; (b) the informatics platform which consists of hardware and software of the machines and the totalization servers, and (c) the platform or communications network that provides the communications between the different components of the system.

The informatics and telecommunications platform of an electoral system must satisfy a group of properties and characteristics that guarantee the integrity of such



a system. For the purpose of this report, telecommunications is defined as the capacity to transmit and receive data electronically, using components of hardware and software, between the voting location and the site for totalization.

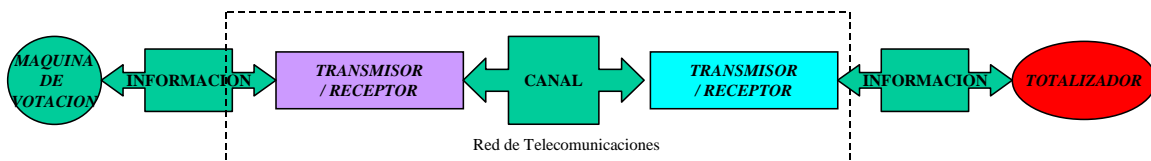


Figure 1

In Figure 1 we show the simple model of the generic telecommunications network that supports a voting system. The characteristics of the network include simplicity, flexibility (especially with reference to routing and good response time) and maintenance (including availability, redundancy of resources and connections, particularly in the connections to public networks). The exchange of information between voting machines and the totalization system takes place through an application or a group of programs that work together to provide a function to the end user, whether it is the voter or the electoral administrator.

### Description of the network

In Figure 2 we show the telecommunications platform installed by CANTV for the electoral process of the past August 15<sup>th</sup>.

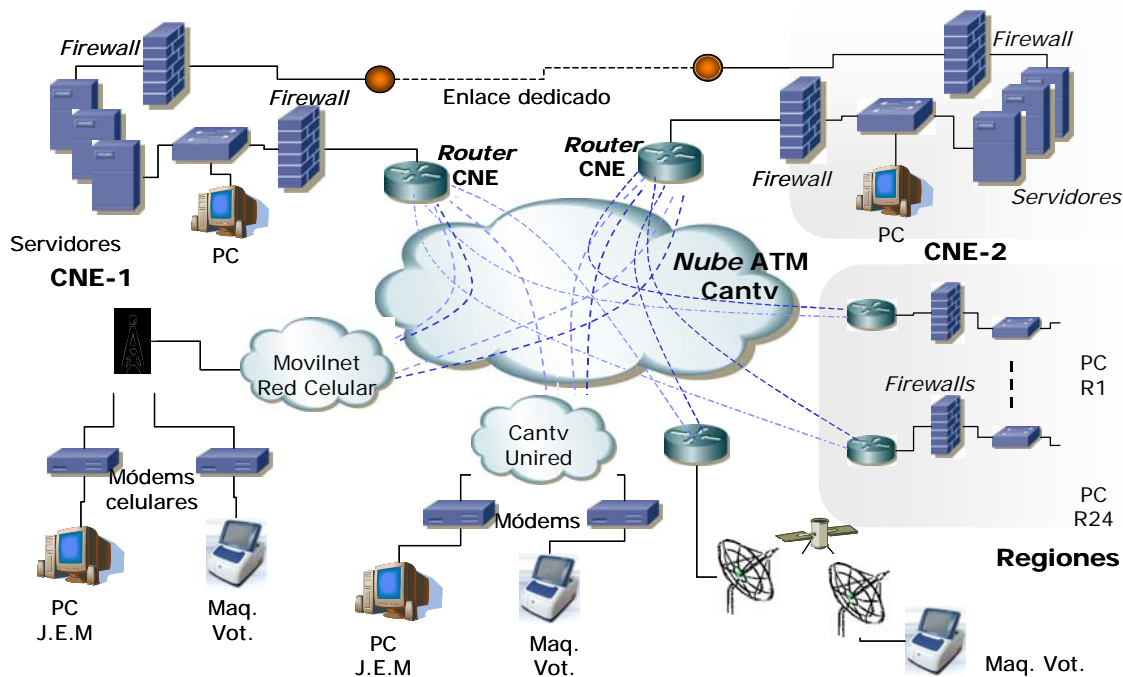


Figure 2

According to CANTV, this company<sup>6</sup> "...performed a feasibility study to identify the voting centers with facilities for automated transmission which gave as a result ....after performing the tests ... the feasibility of 4.611 voting centers which was formally reported to the CNE."

"The configuration of the network was designed with schemes of physical and logical redundancy with which we managed to satisfy the communications

<sup>6</sup> Taken from the report of closing of the Project CANTV Recall referendum Process August 15<sup>th</sup>. Autor: CANTV

between the two central locations of totalization, a MAIN one and another for Contingency, twenty-four regional headquarters, Voting Centers, Municipal Boards, via the CANTV and MOVILNET platforms for the purpose of transmitting all of the information towards the main sites.

“The scheme was completely redundant and with such a configuration it was possible to reroute the data if there was a failure in any other circuit. The premise of change to the contingency site was, if, and only if the connection to the main site was completely lost. At that moment, there would an automatic transmission to the second contingency headquarters”

“We used the wired telephone network of CANTV, the Movilnet cell phone network, as well as the platforms of Unired, CDMA 1X, VSAT, Frame Relay, and intelligent network and, as backing, we designed two locations for call centers, one located at CET in San Martin for an operations control center of CANTV and another at ATENTO.

The properties and characteristics described above by the supplier, will serve as reference for the analysis of the behavior of the electoral system. This in its entirety must satisfy the following properties to be considered reliable: (a) security, (b) precision, (c) integrity, (d) capacity to be audited, (e) capacity for tabulating the votes, (f) counting of the votes, (g) retention of the data, (h) appropriate use of telecommunications and (i) manageable.

The analysis performed fundamentally focused on the detailed revision of the communications *logs* from the voting machines and the Electoral Board machines

towards the totalization centers via the fixed wire network and the cellular network of CANTV. The graphs of the established sessions originating in the fixed network with the data obtained from the analyzed log and the diagram of the behavior of the CANTV report, coincide. The main findings of the analysis were the following:

## 1. IMPORTANT FACTS OF THE NETWORK

- a. The presence of two private networks was detected: the access network, identified with a range of addresses 172.X.X.X and the trunk network identified with the range of directions 10.X.X.X.
- b. The protocol L2TP for establishing VPN (Virtual Private Network) sessions between the voting machines and the totalization centers.
- c. All of the machines dialed the access number 9CNE (9263), which connected them with the Remote Access server (RAS) associated with the geographical location of the machine.
- d. The voting machines had an authentication mechanism consisting of the form *userID@dominio*, where *userID* had the following structure: *CCCCC\_M\_T\_X@cne2004.gov.ve* (Center, Machine, Tome (Notebook), X: verification)

e. the totalization machines had a mechanism for authentication consisting of the form *userID@dominio*, where *userID* had the following structure: *ESTADO\_XX@cne2004.gov.ve* (State, X: consecutive)

f. A total of 17,204 sessions from 14,428 voting machines were established through the fixed wire network. In those sessions one observes three different reasons for termination: server request, machine request and loss of carrier. 94.56% (16.267) of the sessions established were done by 99.15% (14.306) of the machines connected to the fixed wire network that made between one and three connection attempts. The corresponding data is detailed in Tables No. 1 and 2

**Table No. 1.**  
**Sessions established from voting machines and type of termination**

Llamadas	Por host	Pérdida portadora	Por Usuario	Total general	
1		3979	2771	5807	12557
2		502	1663	909	3074
3		96	386	154	636
4		17	113	22	152
5 ó más		83	641	61	785
Total general		4677	5574	6953	17204

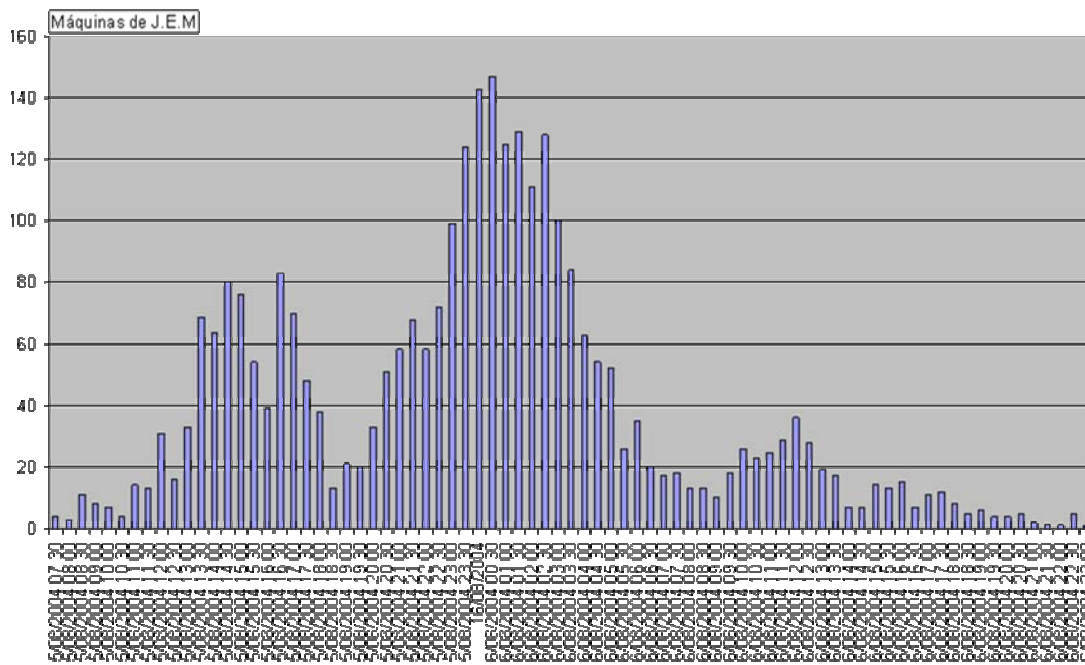
} 16.267 94,55%

**Table No. 2**  
**Total of machines with effective sessions**  
**(Based on the last call from each machine)**

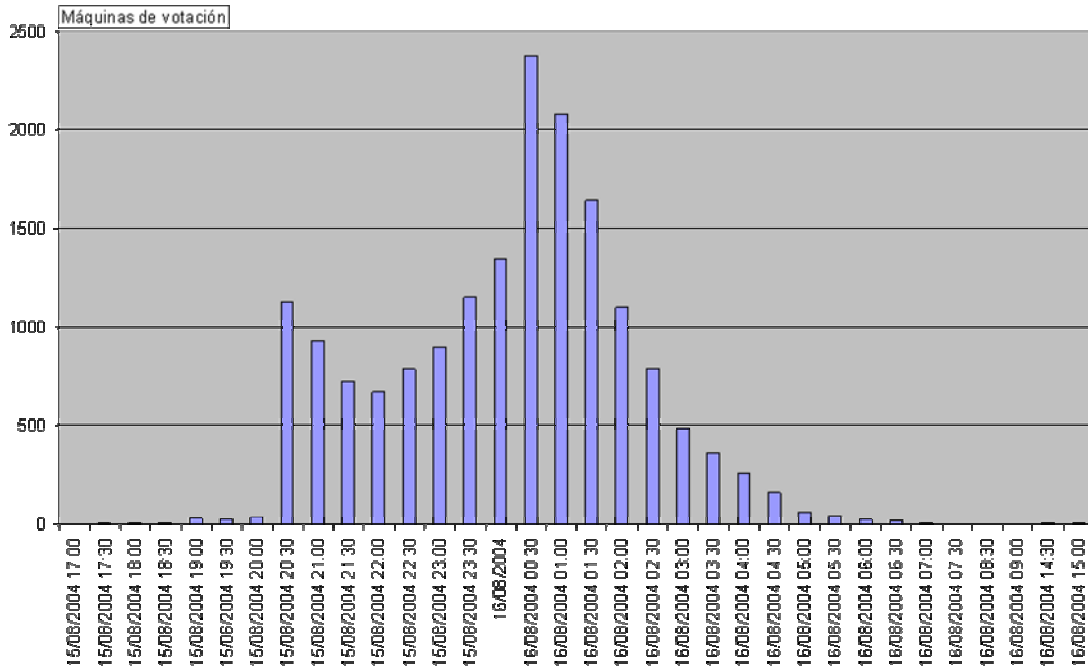
Llamadas	Por host	Pérdida portadora	Por Usuario	Total general	
1		3979	2771	5807	12557
2		278	549	710	1537
3		35	81	96	212
4		6	22	10	38
5 ó más		11	59	14	84
Total general		4309	3482	6637	14428

} 14.306 99,15%

h. we observed calls from 7 AM from the Municipal electoral Boards (Figure No 1) and starting at 4:20 PM from the voting machines (figure No. 2)



**Graph No. 1**  
Sessions established by the machines of the electoral boards.  
(Time series)



**Graph No. 2**  
Sessions established by the voting machines.  
(Time Series)

i. The average duration of the sessions appears to be independent of the amount of data transmitted and also independent of the time of day.

## FINDINGS

### 1. BIDIRECTIONALITY

To insure the fulfillment of the conditions that characterized an integral automated voting system, it is necessary for such a system act in a unidirectional fashion, that is, the data transmission should flow exclusively and only in the direction machine

→ totalizer and not in the opposite direction. The flow of application traffic towards the machines is only acceptable for the purpose of recognition (security validation) and for starting and maintaining the session (connection control).

*Quantitative Results.* By analyzing the register of calls and sessions established between the voting machines and the totalization servers, we observed that in almost all of them<sup>7</sup> there was bidirectional traffic.

## 2. HETEROGENITY. TRAFFIC VOLUME

If one starts with the premise that all of the voting machines use the same software, it is logical to infer that all of them should have transmitted the same type of information (i.e. the content of the cover sheet) where the only variable data would be that associated with the unique identification of each center-table-notebook. Nevertheless, as is explained later, the observed behavior is not homogenous.

*Quantitative results.* Starting with the observation of the data, the sample can be classified into three groups according to the outgoing traffic (transmitted from the server) in the following way:

- Low: transmission less than 5,000 bytes.
- High: transmission between 5,000 bytes and 8,000 bytes
- Excessive: traffic above 8,000 bytes

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<sup>7</sup>In the transaction report of the Cantv fixed network, 2 machines were identified that had no outgoing traffic in any of their calls. It is reasonable to assume that an alternate route was used for transmission of results, either through a mobile cellular network, or through the digitalization and transcription procedure in the respective Municipal Electoral Board.



The numbers of machines associated with each level, incoming traffic, outgoing traffic and the incoming/outgoing ratio is detailed in table no 3. There it is possible to see that 6,884 machines (47.72%) are located in the low interval, while 7,164 (49.66%) and 378 (2.63%) are located in the groups: high and excessive.

**Table No. 3**  
**Total number of machines according to the volume of bytes sent by the server.**

<b>Nivel_Output</b>	<b>Maquinas</b>	<b>Bytes entrantes</b>	<b>Bytes salientes</b>	<b>Relación bytes salientes vs entrantes</b>
1. Bajo	6.884	4.168	1.530	38,66%
2. Alto	7.164	31.254	6.409	21,70%
3. Exceso	378	46.628	9.283	23,38%
<b>Total general</b>	<b>14.426</b>	<b>18.732</b>	<b>4.156</b>	<b>29,84%</b>

In the previous table one can equally observe that the relationship between outgoing bytes and incoming bytes is not homogenous, since the lowest segment is 15%~17% larger when compared with the segments of high and excessive traffic (that do look homogenous between them). There is also evidence that the average traffic out if the high and excessive segments is, in absolute terms, 4 to 6 times larger than the low segment, respectively.

As was described in chapter V, there is a coincidence between the machines that presented high and excessive traffic and the universe of machines with an irregular pattern of voting from a statistical point of view.

### 3. HETEROGENEITY. AMOUNT AND SIZE OF PACKETS

The data transmission using the telecommunications network of the electoral system evaluated, responds to a model of transmission by packets, that is, the data

are grouped in equal size or different size groups (number of bytes) with the purpose of optimizing the speed and increasing the reliability of the transmission.

The amount and size of the packets required for transmission of a message are determined by three variables; the protocol, used, the characteristics of the transmission media and the size itself of the messages to be exchanged between applications.

Depending on the requirements of the application and the configuration of the protocol, a system that receives a message may send the sender additional packets to confirm the reception of data or to request the retransmission of missing packets. Once again, considering the premise that the same software was used in all voting machines, this premise is inconsistent with the observation as to the quantity and size (bytes) of the packets.

The result of the inspection of the data for the total number of incoming and outgoing packets reveals two completely different behaviors; the low level of traffic represents a proportion of 10:1 between incoming and outgoing packets with a large variance, while in the segments high and excessive the proportion is practically 1:1 with an almost null variance. This is summarized in Table No. 4

**Table No. 4**  
**Incoming and outgoing packets**  
**(referenced to the outgoing byte size)**

<b>Nivel_Output</b>	<b>Promedio paquetes entrantes</b>	<b>Promedio Paquetes salientes</b>	<b>Promedio paquetes entrantes vs. salientes</b>	<b>Varianza paquetes entrantes vs. salientes</b>
1 Bajo	32	4	10	28
2 Alto	52	52	1	0
3 Exceso	70	70	1	0
Total general	43	29	5	36

The first behavior is expected under the following conditions: more incoming data and few return messages; the latter, either to the effect of authenticating as well as for maintaining and retransmitting the packets. The second behavior may be observed when there are high rates of retransmission (quality of the line / congestion) or between two systems that exchange transactions one to one.

## VIII

### CONCLUSIONS AND FINAL RECOMMENDATIONS

I. We have verified grave irregularities and elements of fraud that vitiate and absolutely nullify the Recall referendum of the mandate Hugo Chávez Frías and future electoral events. Some of the elements are; the active participation of the Armed forces in the electoral process, the use , against what it is stated in the law of an automated voting system and the refusal to count the ballots issued by the voting machine and later deposited in a ballot box; the removal, at the last minute, of the members of the Electoral boards in the whole country, substituting them for militants of the governments official party, he migration, without mediating a request by the affected participants ; the violation of the norm in the law that orders the closing of the electoral registry ninety days before the votes take place, allowing the incorporation of to that register of two million new voters in weeks prior to the August 15<sup>th</sup>.; the repetition of this for the upcoming regional and municipal elections; the massive hand out f nationality to foreigners and ID cards to members of the official party and in locations out of the control of the National identification office and of the same Electoral power;; the publication and handing over to the Government of the registry wit the identity and addresses of those that requested the recall of the mandate of president Chávez subjecting the to pressures or denying them the benefit of public services; the elimination of thousands of voters, under the false argument that they were dead, that is , the scandalous use of State funds

and the states' oil industry on the part of the government to finance its advertising.

II. The qualitative fraud, prepared from the electoral with the tacit backing and approval of the officials and institutions dominated by Hugo Chávez Frías, which constitute treason to the spirit and reason for dialogue that took us to the negotiated agreements of may 2003.

III. We have confirmed the bidirectionality of the communications of the voting machines, the different types of endings of connections, the difference in traffic patterns, the transmissions out of the allowed schedule and the use of machines and a fingerprint grabbing system which has not been certified. None of these were audited prior to or after the vote.

IV. The communications were intervened from various centers with the objective of modifying the results of the popular will. These centers were at the headquarters of various public institutions which denotes a terrible abuse of power.

V. Under these conditions it is impossible to participate in any electoral event.

VI. The National Electoral Council lacks the capacity, suitability and impartiality to advance any election. The Constitutional hall of the

Supreme Court has ultimate responsibility for these irregularities for naming the CNE Directors and not having acted by virtue of the multiple accusations about irregularities and fraud. This Committee even tried publicly to obtain an audience with the members of that hall, with the objective of bringing to them the results of this preliminary report without receiving an opportune response.