canso
civil air navigation services organisation

Transforming Global ATM Performance

Airspace Concept Redesign and Operational Approval Workshop

NOVEMBER 25 - 29, 2013

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Outline

- CANSO Mission & Vision
- KPA
- ASSEMBLY RESOLUTION
- OPERATIONAL IMPROVEMENTS
- IFSET
- SUMMARY
- Q & A

Mission: 'Transform Global ATM Performance'

... a globally harmonized and interoperable air navigation system that provides seamless & cost-effective service

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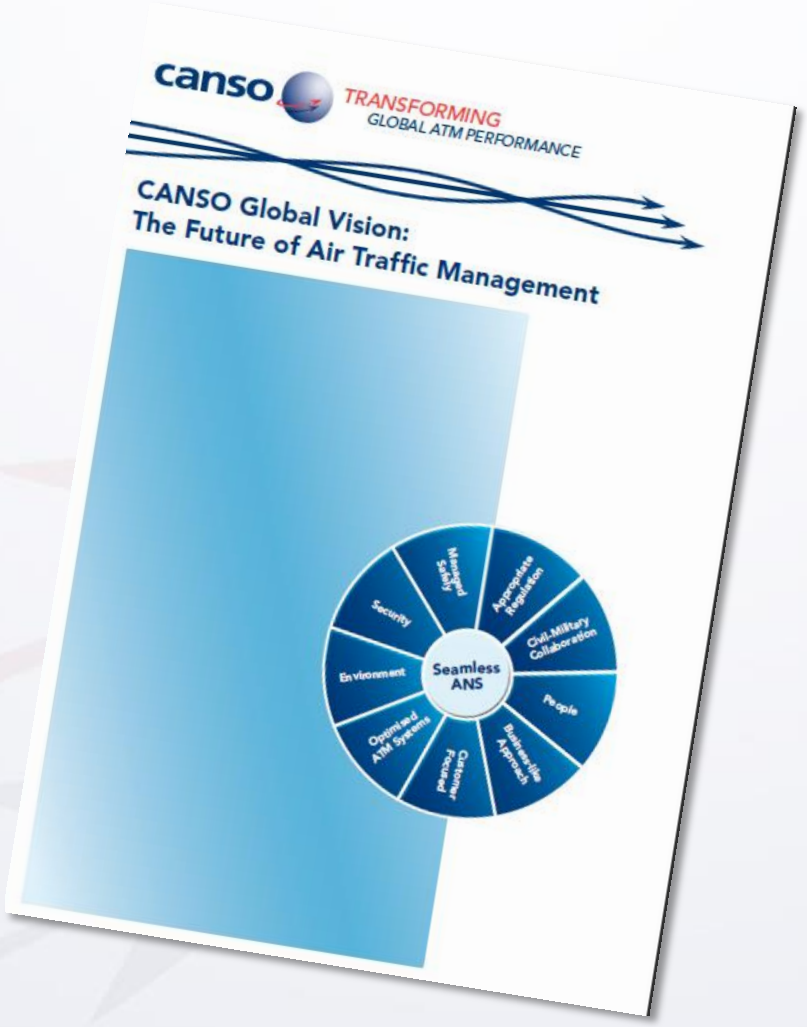
CANSO Vision

CANSO's Global Vision identifies the **areas of change** needed within the **regulatory** and **operational domains**, as well as the issues we must address if we are to achieve a truly global ATM system



Expectations

- Access and Equity
- Capacity
- Cost-effectiveness
- Efficiency
- Environment
- Flexibility
- Global interoperability
- Participation by the ATM community
- Predictability
- Safety
- Security

OPERATIONAL IMPROVEMENTS

- PBN
- CDO/CCO
- RVSM
- FUA
- ETC.

Getting there….

ICAO – STRATEGIC OBJECTIVE

Safety – Enhance global civil aviation safety

Security – Enhance global civil aviation security

Environmental Protection and Sustainable Development of Air Transport - Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment

- Assembly resolutions
- Action Plans
- GATMOC/GANP

Mission Statement

A37-19: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change

j) implement an emphasis on increasing fuel efficiency in all aspects of the ICAO's

9. *Encourages* States to submit their action plans outlining their respective policies and actions, and annual reporting on international aviation CO_2 emissions to ICAO;

10. *Invites* those States that choose to prepare their action plans to submit them to ICAO as soon as possible preferably by the end of June 2012 in order that ICAO can compile the information in relation to achieving the global aspirational goals, and the action plans should include information on the basket of measures considered by States, reflecting their respective national capacities and circumstances, and information on any specific assistance needs;

l) request States to continue to support the efforts of ICAO on enhancing the reliability of measuring/estimating global GHG emissions from international aviation;

IFSET

- **ICAO FUEL SAVINGS ESTIMATION TOOL**
  - Simple to use and scientific defendable
- States will begin reporting on fuel savings from operational improvements in 2012.
- Not all States have the ability to quantify these savings.

IFSET – WHAT IT DOES

- Allows those States without modelling and/or measurement capabilities to estimate fuel savings from operational improvements.
- Consistent with CAEP-approved GHG models.
- Consistent with Global Air Navigation Plan.
- Easy-to-use / minimal data requirements.

IFSET – WHAT IT DOES (Cont.)

- The tool can estimate:
  - Effects of shortening / eliminating level segments on departure and arrival.
  - Effects of shorter routes (either in time or distance).
  - Effects of cruising at different altitudes.
  - Effects of reduced taxi times.

IFSET – WHAT IT DOES NOT

- The tool does not replace detailed modelling or measurement of fuel consumption already available in a State.

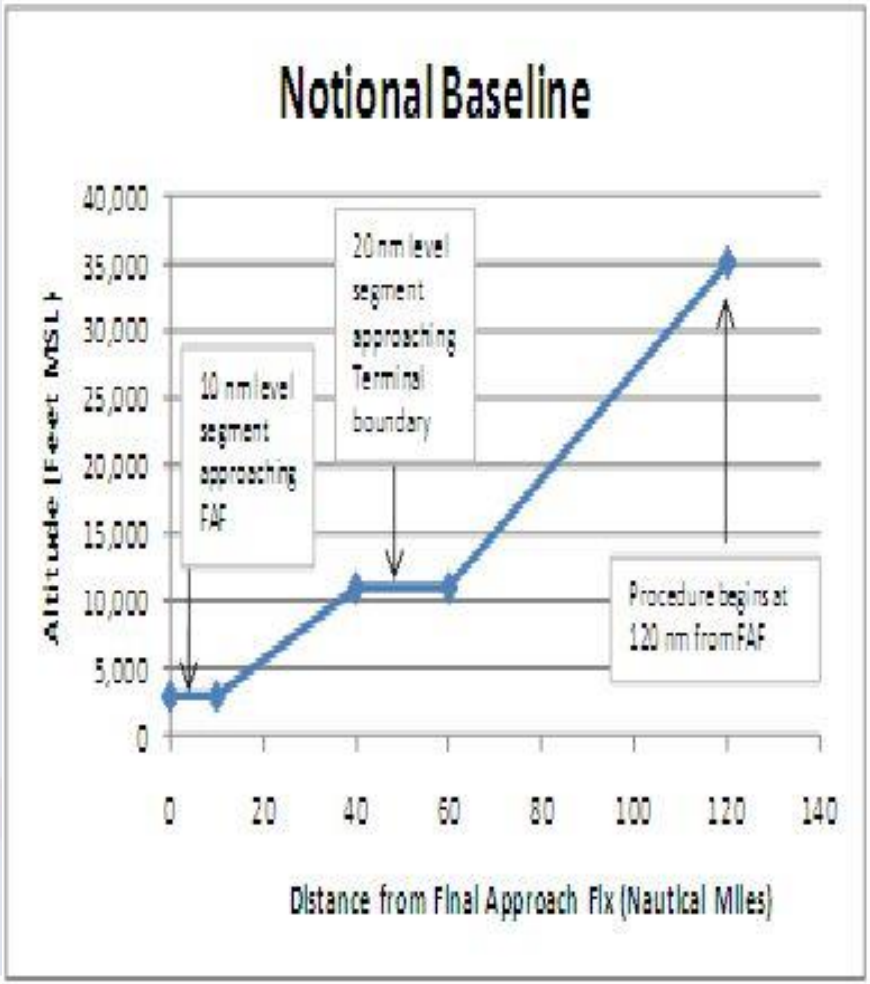
IFSET – HOW IT WORKS

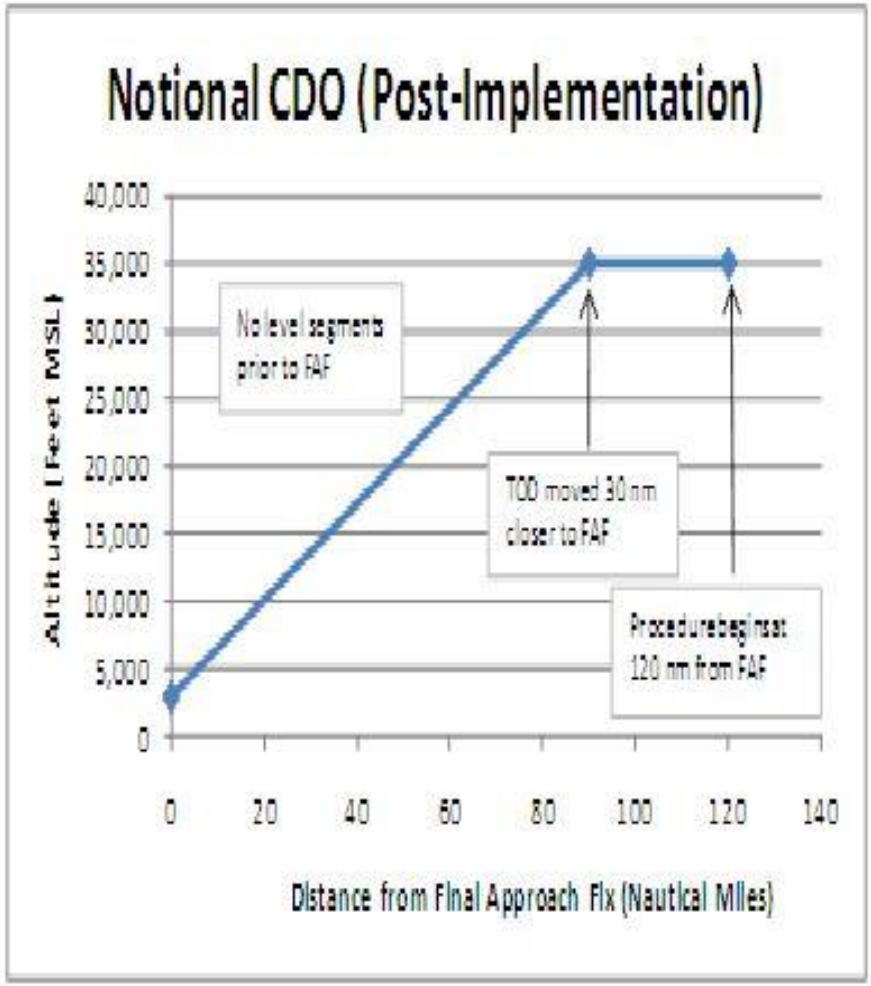
- Pre-compute aircraft performance
  - Level, climb and descent fuel consumption
  - By group of aircraft type
  - In 1000 foot intervals

IFSET – HOW IT WORKS – USER INPUT

- Fleet mix defined for baseline and post-implementation scenario
  - Aircraft type group
  - "Remaining flight distance"(as a surrogate for weight)
- User selects "elements" to define the baseline and "new" procedure
- Tool estimates the change in total fuel consumption between the 2 scenarios

IFSET – example





Action Plan- an example

ABOUT US - NAV CANADA and the Environment

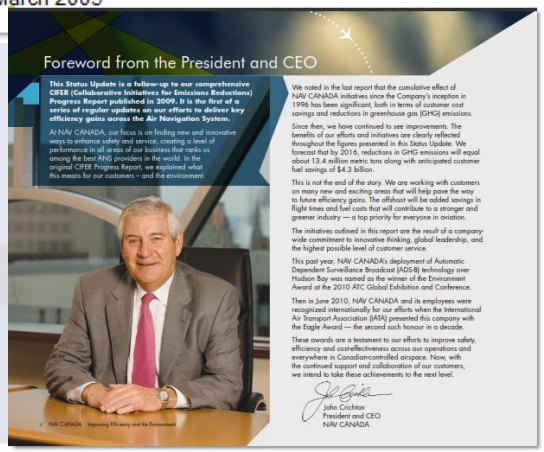
NAV CANADA's Environmental Policy

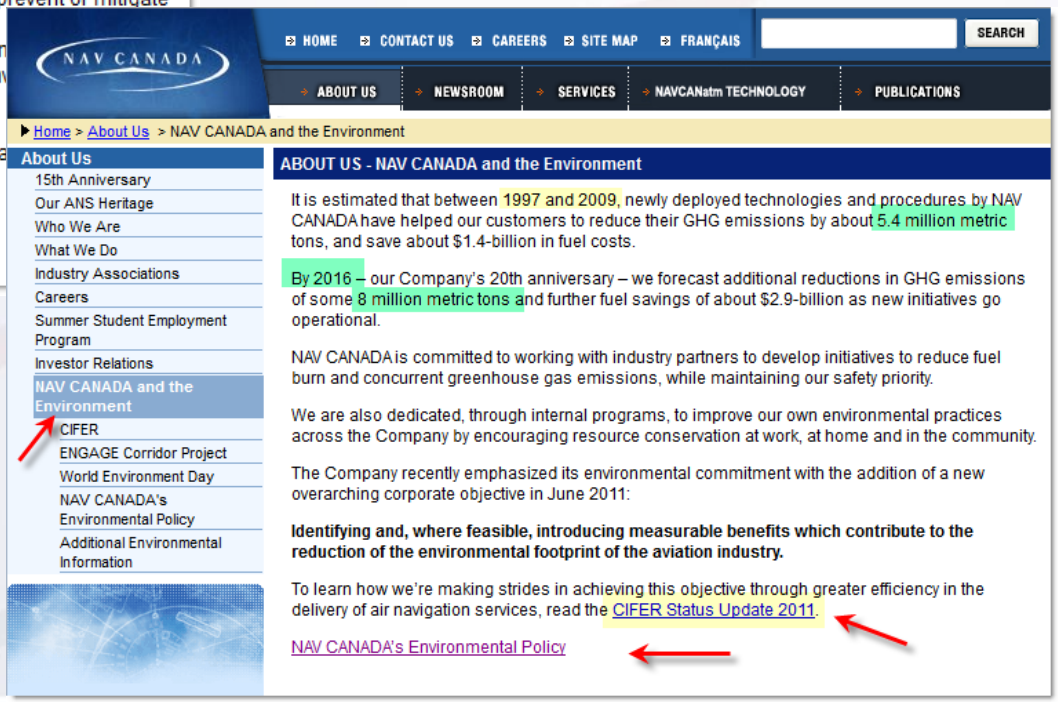
NAV CANADA recognizes the importance of environmental management of its activities. As part of our corporate vision to be the world's most respected Air Navigation Service we are committed to complying with all relevant environmental laws, regulations, by-laws, guidelines and standards, achieving levels of environmental protection and environmental performance beyond that required by law whenever reasonably achievable.

To implement this policy, NAV CANADA will:

- Demonstrate leadership in environmental matters affecting Air Navigation Services;
- Contribute to pollution prevention programs in the aviation industry;
- Assess the potential environmental impacts of all projects and activities and prevent or mitigate adverse effects on the environment;
- Reduce the environmental risk related to the management of ANS systems an
- Maintain, monitor and continually improve environmental performance and en awareness through implementation of an EMS;
- Educate and train staff in environmental risk management;
- Communicate our environmental procedures and requirements to suppliers a

John W. Crichton
President and Chief Executive Officer
March 2005

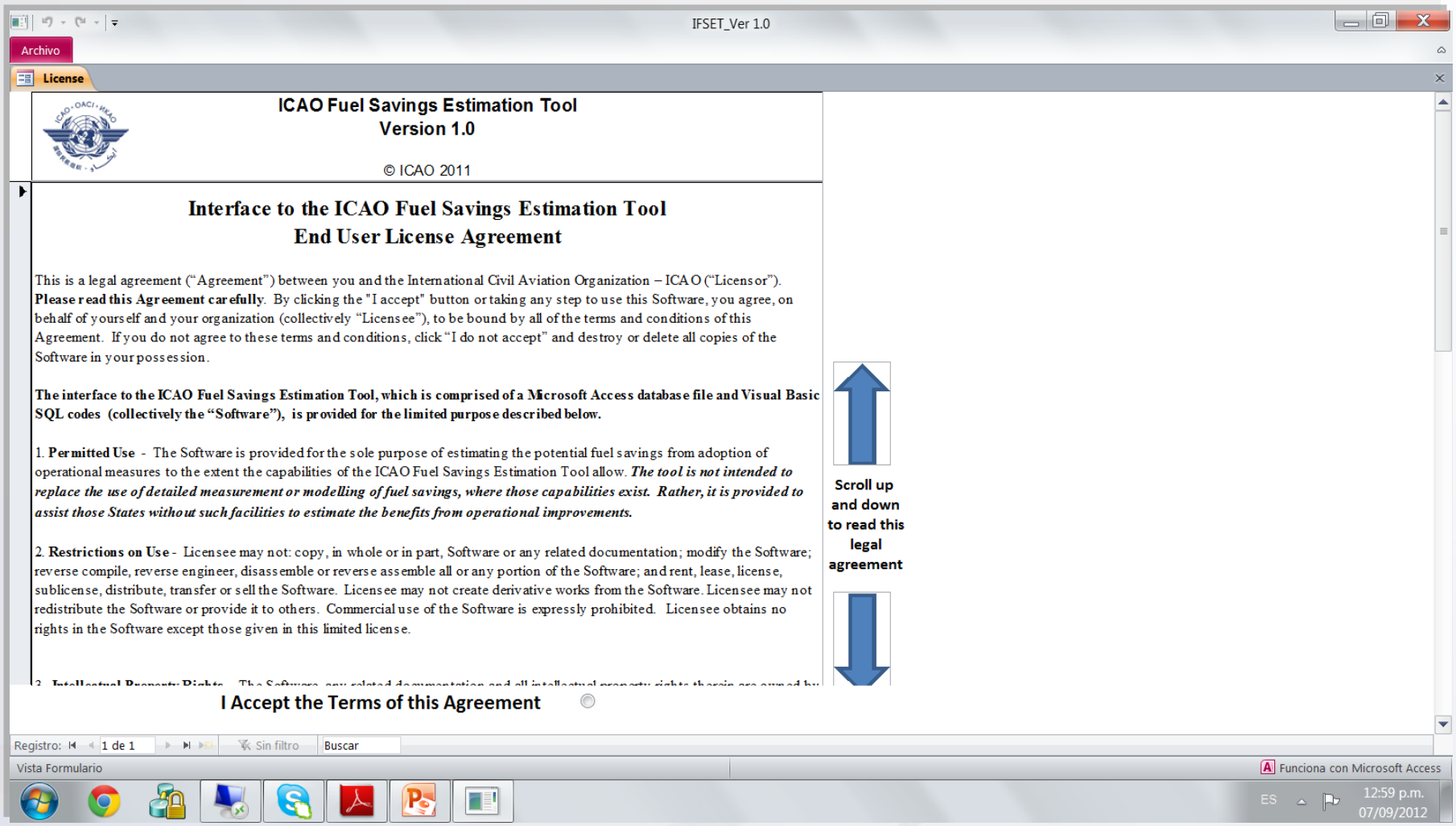





$2.9B
projected fuel savings 2010–2016
8.0M
metric tons of greenhouse gas emissions reductions forecasted 2010–2016
13.4M
metric tons of greenhouse gas emissions reductions forecasted over 20 years
$4.3B
projected total fuel savings 1997–2016. Enough to fly a Boeing 777-300ER around the world more than 10,000 times

IFSET – example

- IFSET



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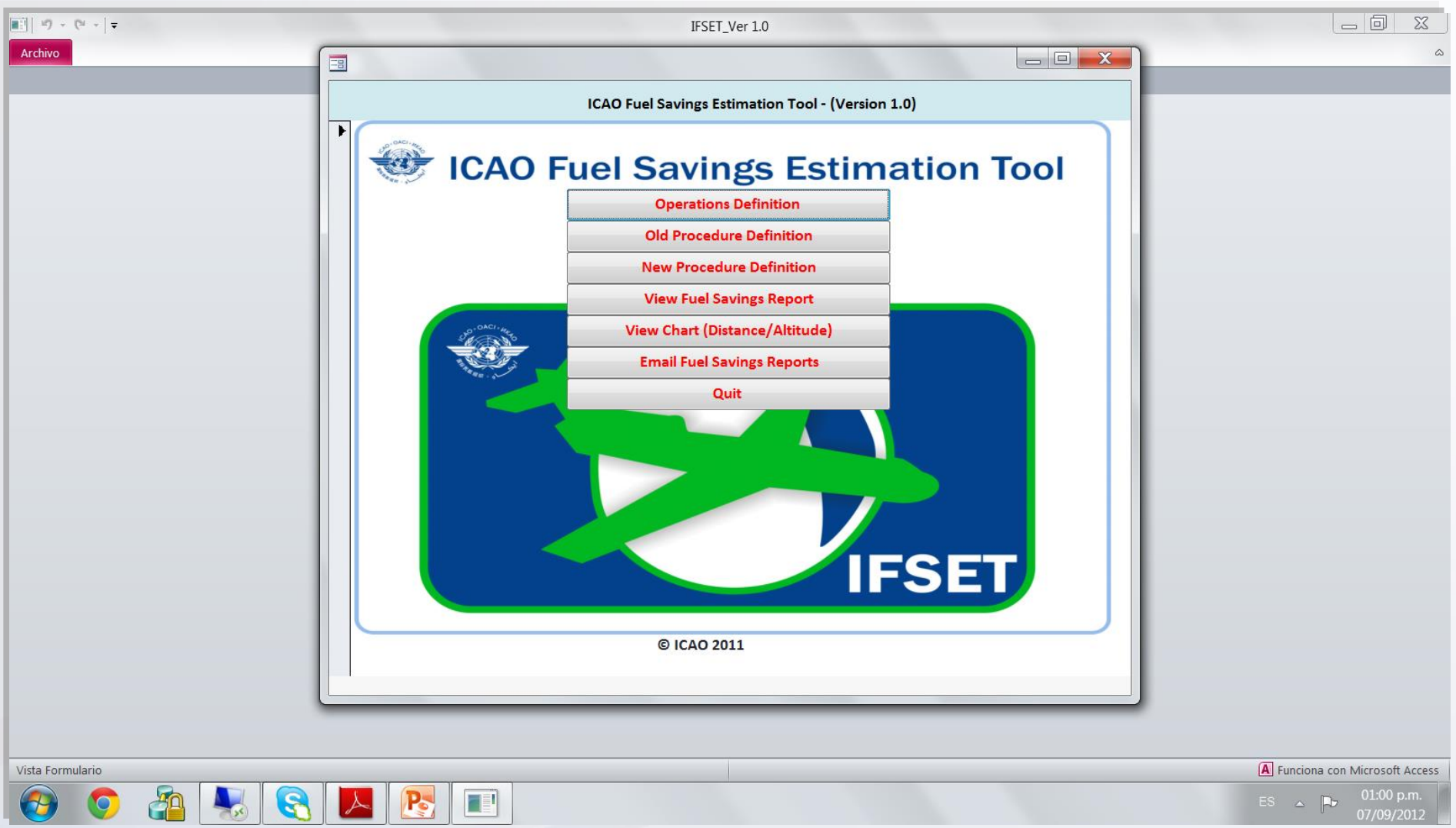

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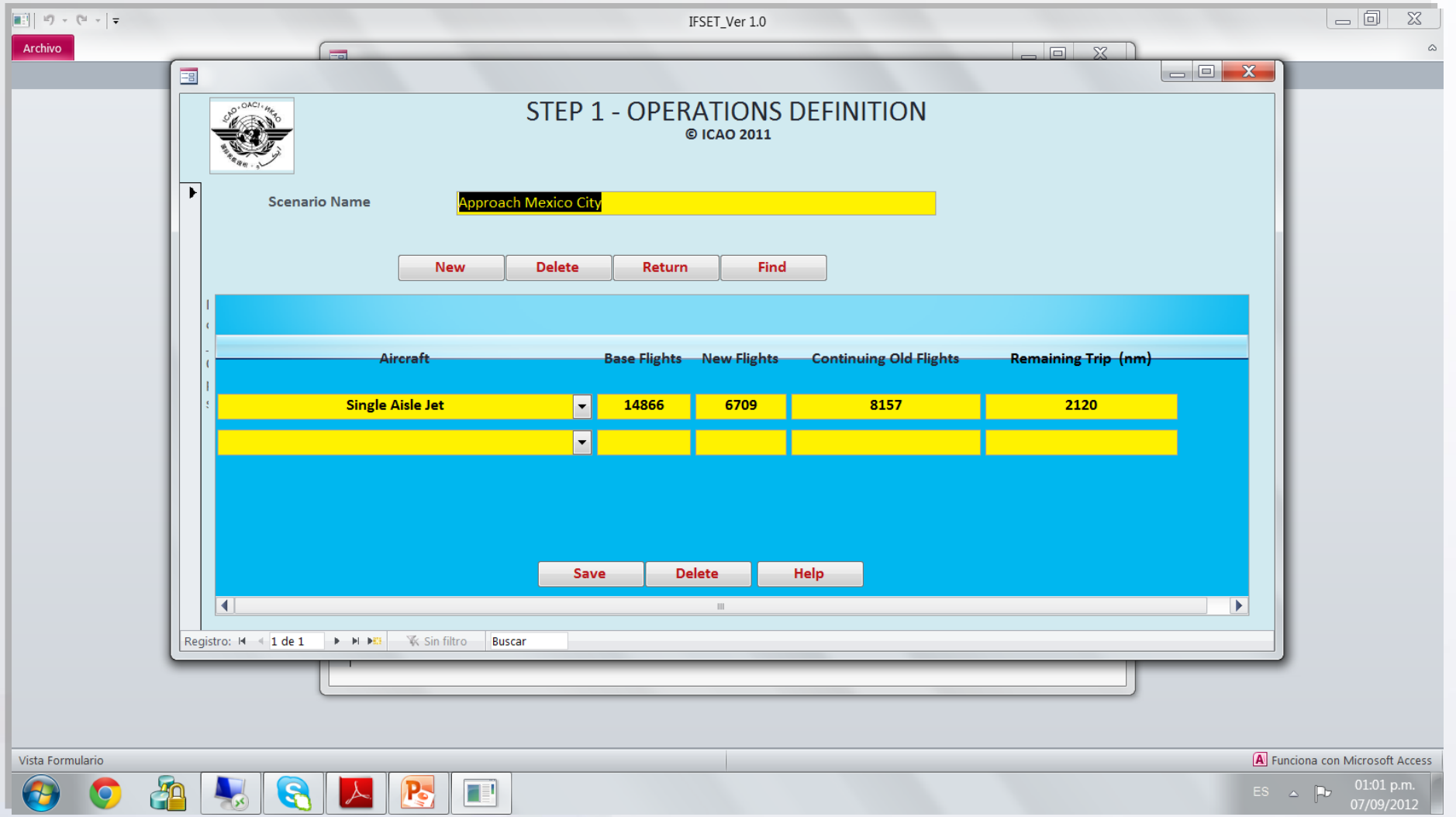

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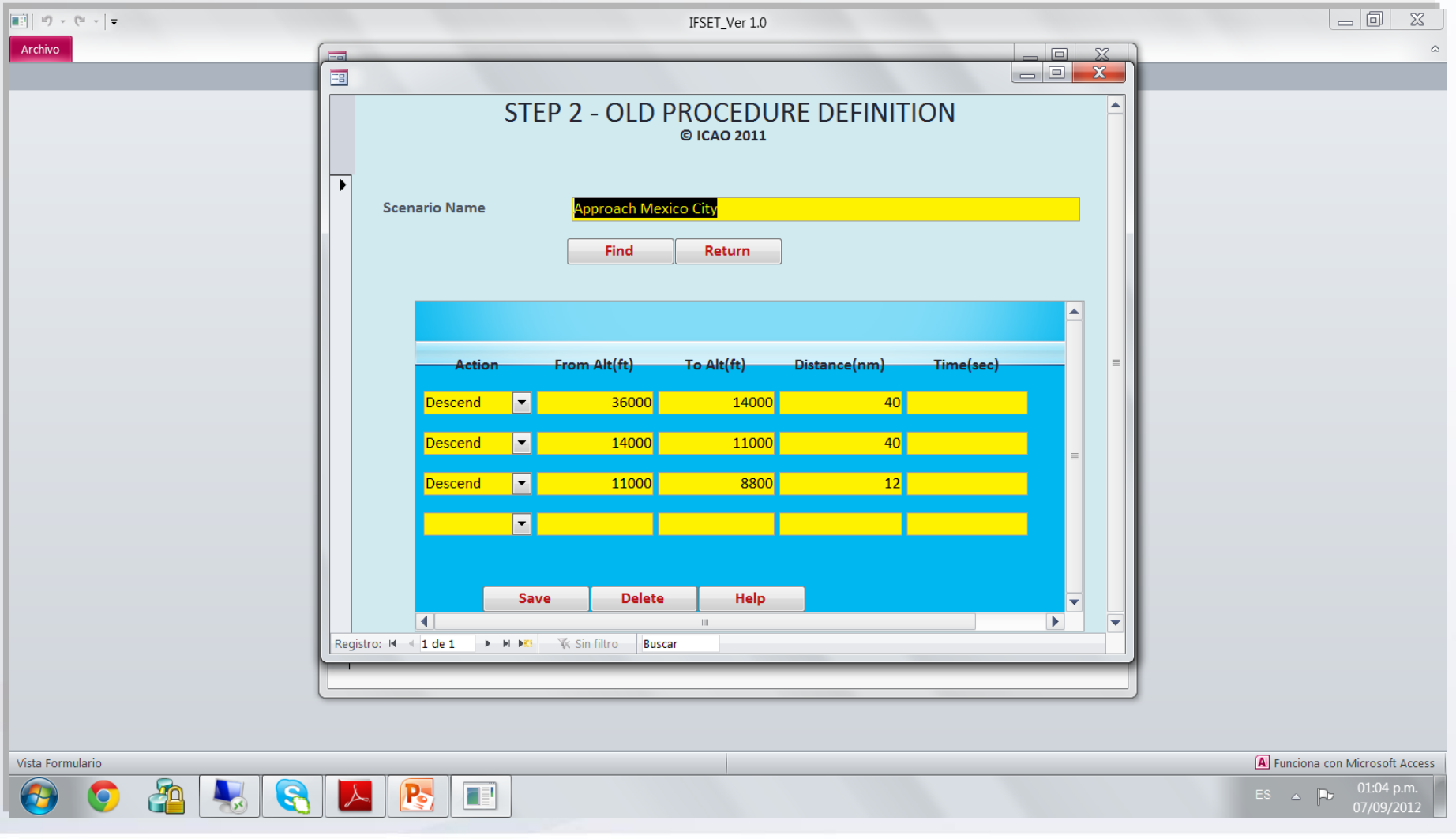

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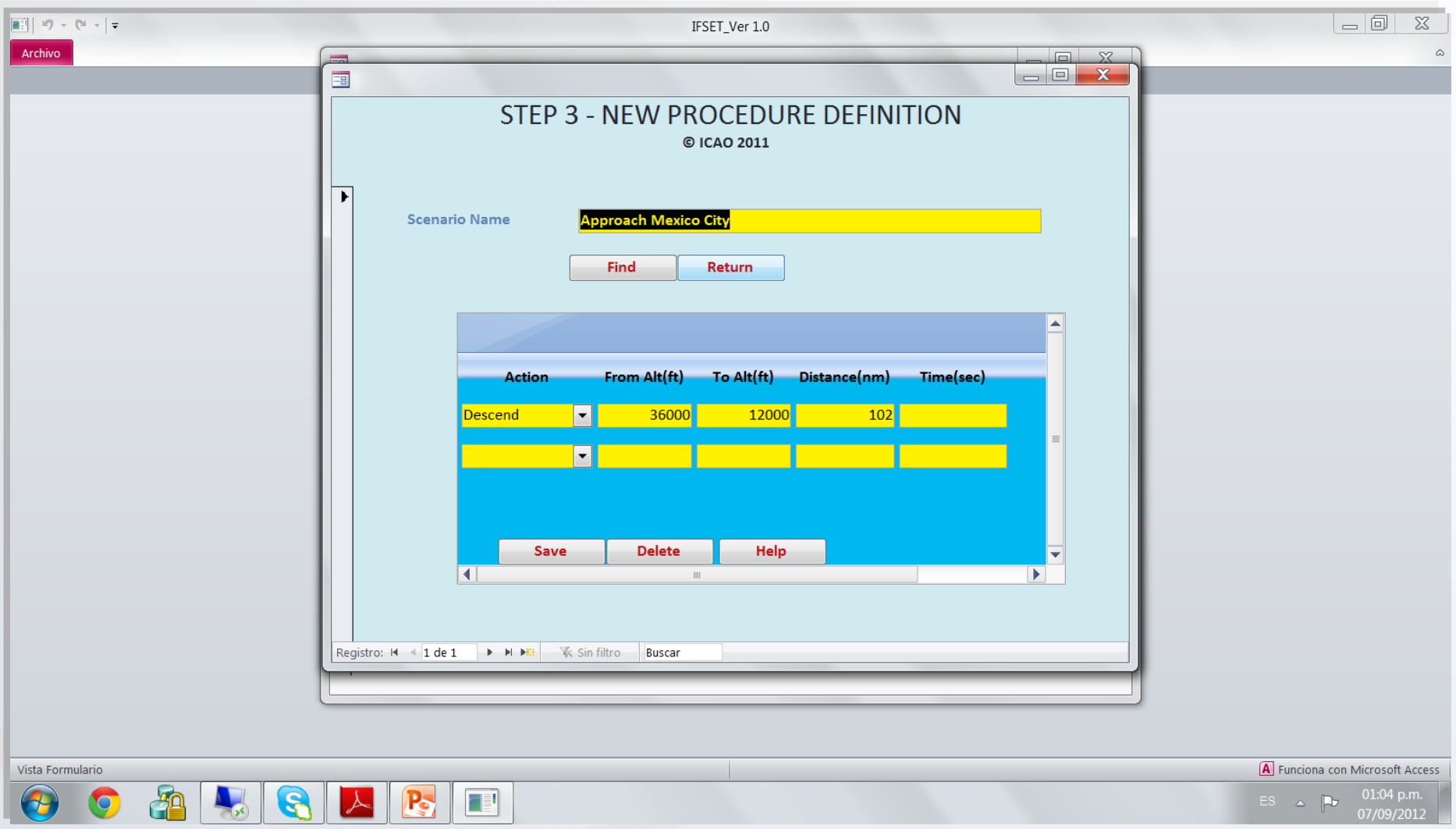

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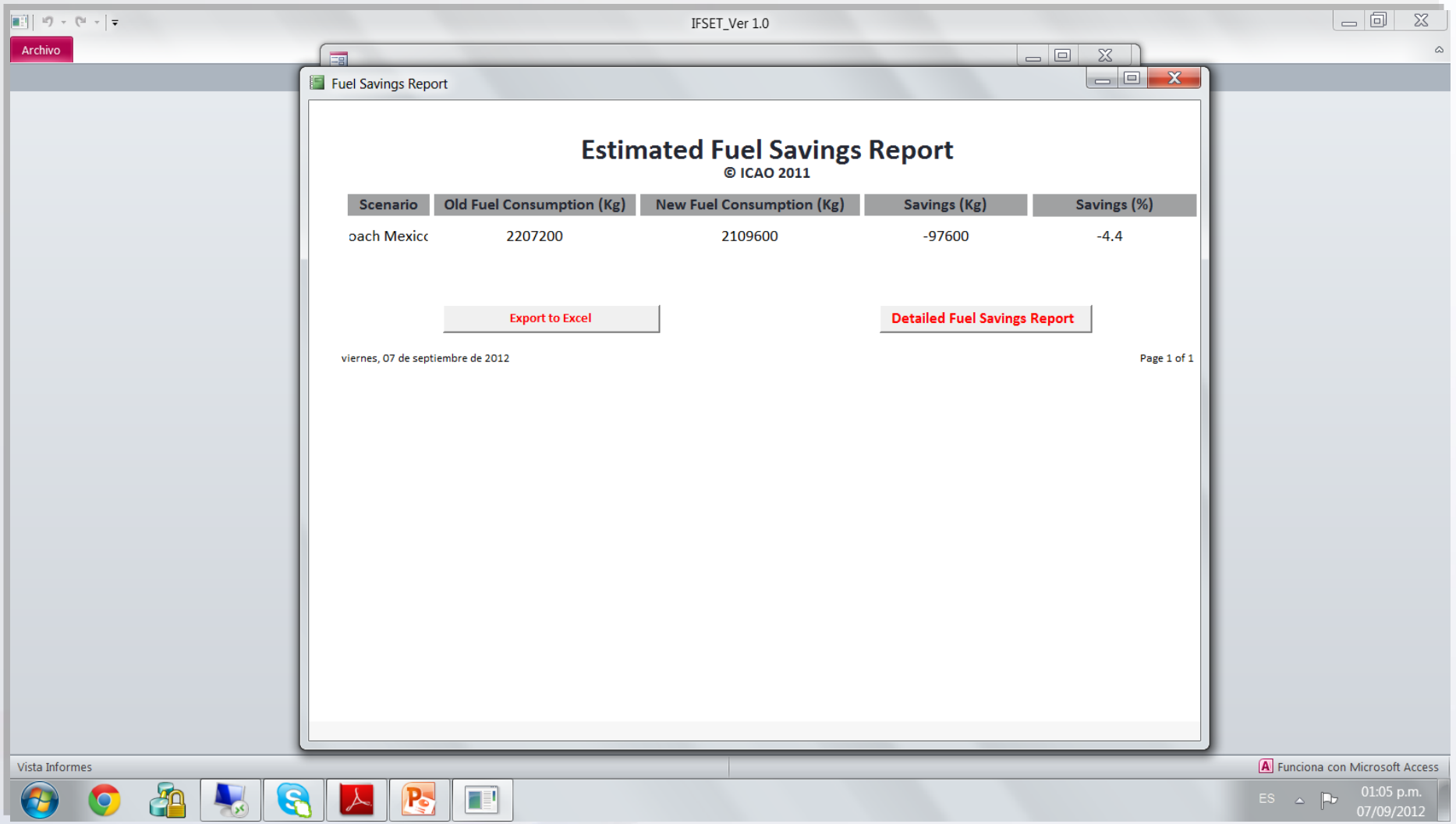
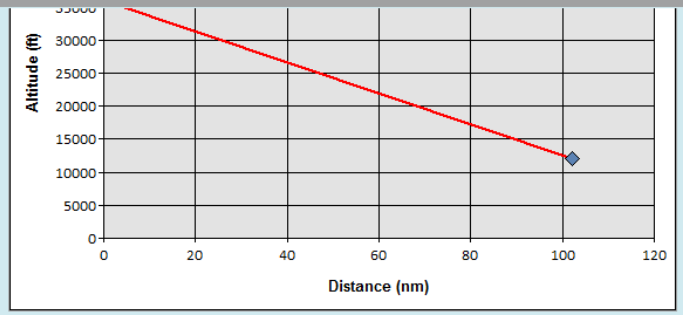


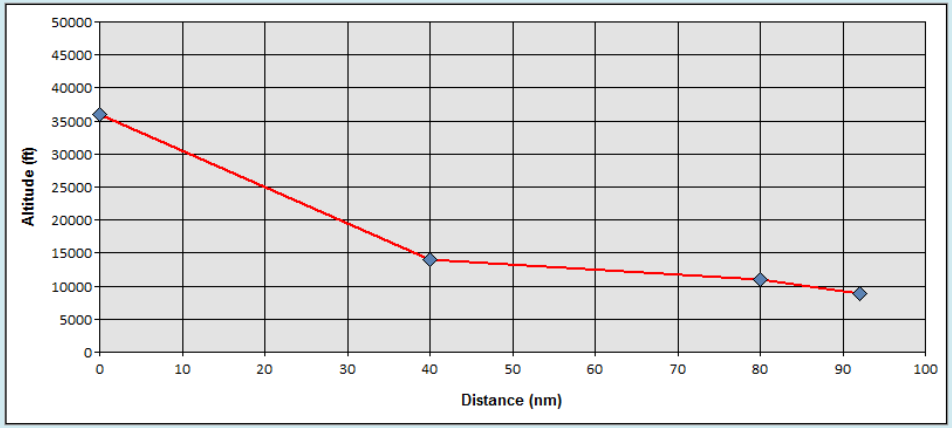
IFSET_Ver 1.0

Archivo

GRAPHICAL VIEW OF SCENARIOS



Old Procedure



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Vista Formulario

Funciona con Microsoft Access

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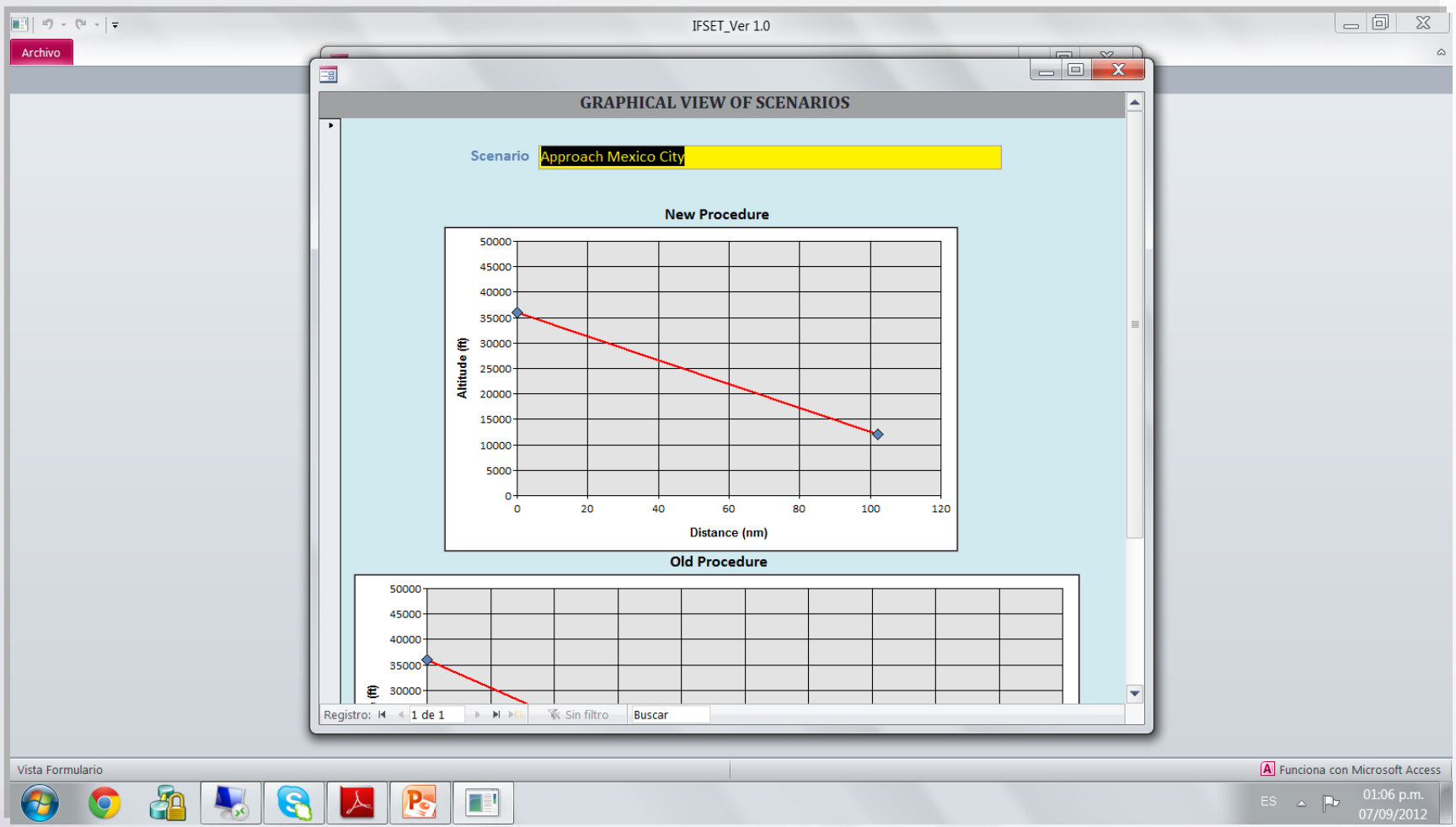
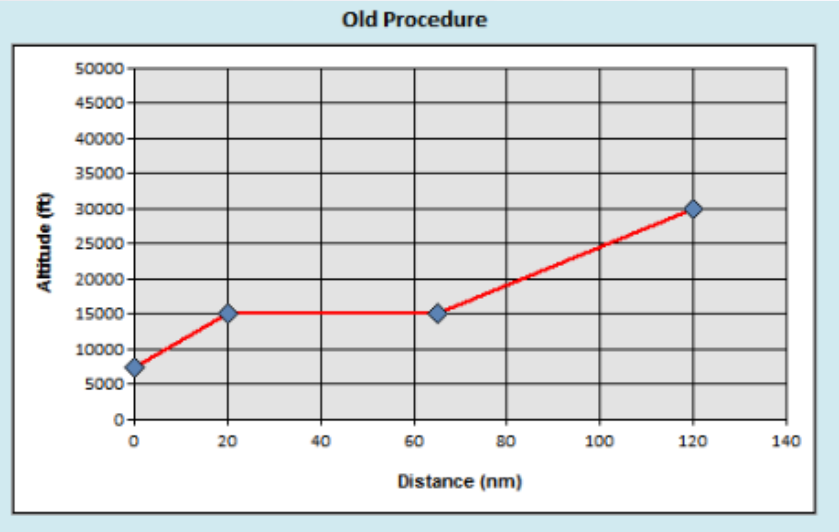
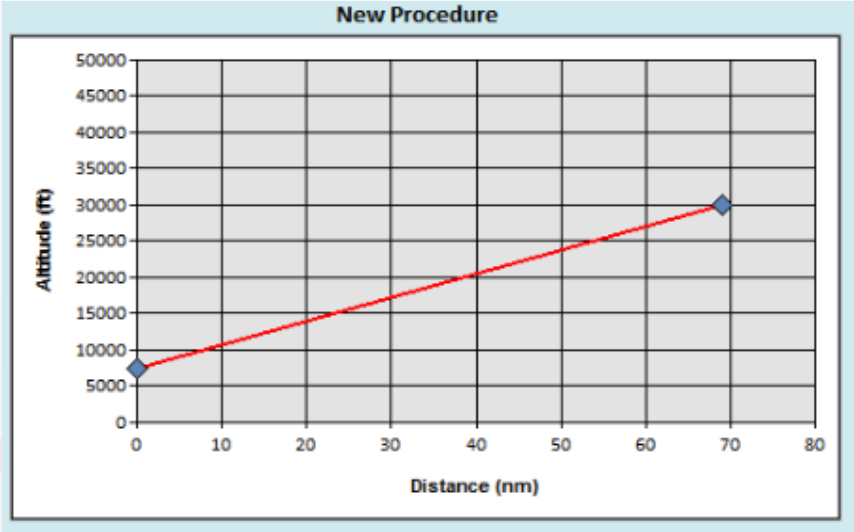


DESPEGUE

2007

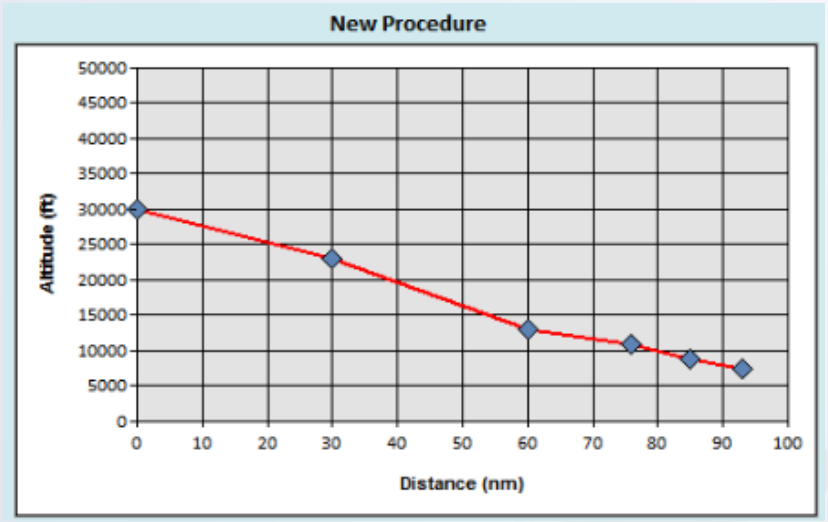


2009

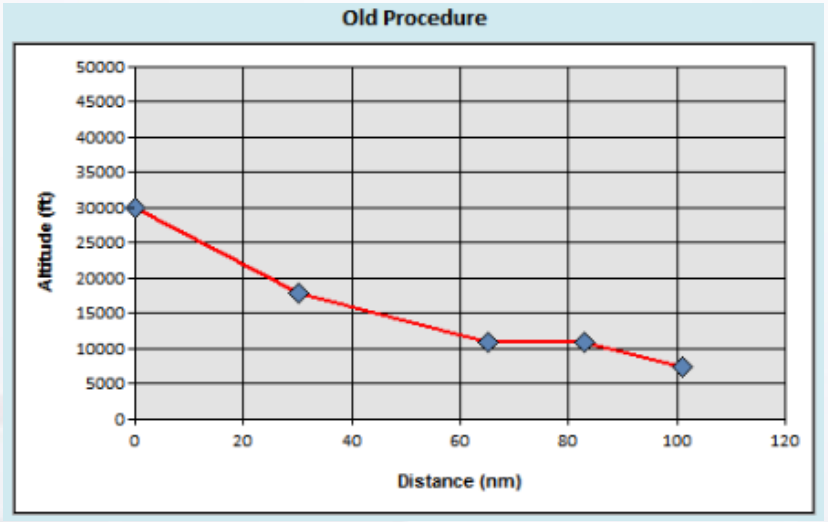


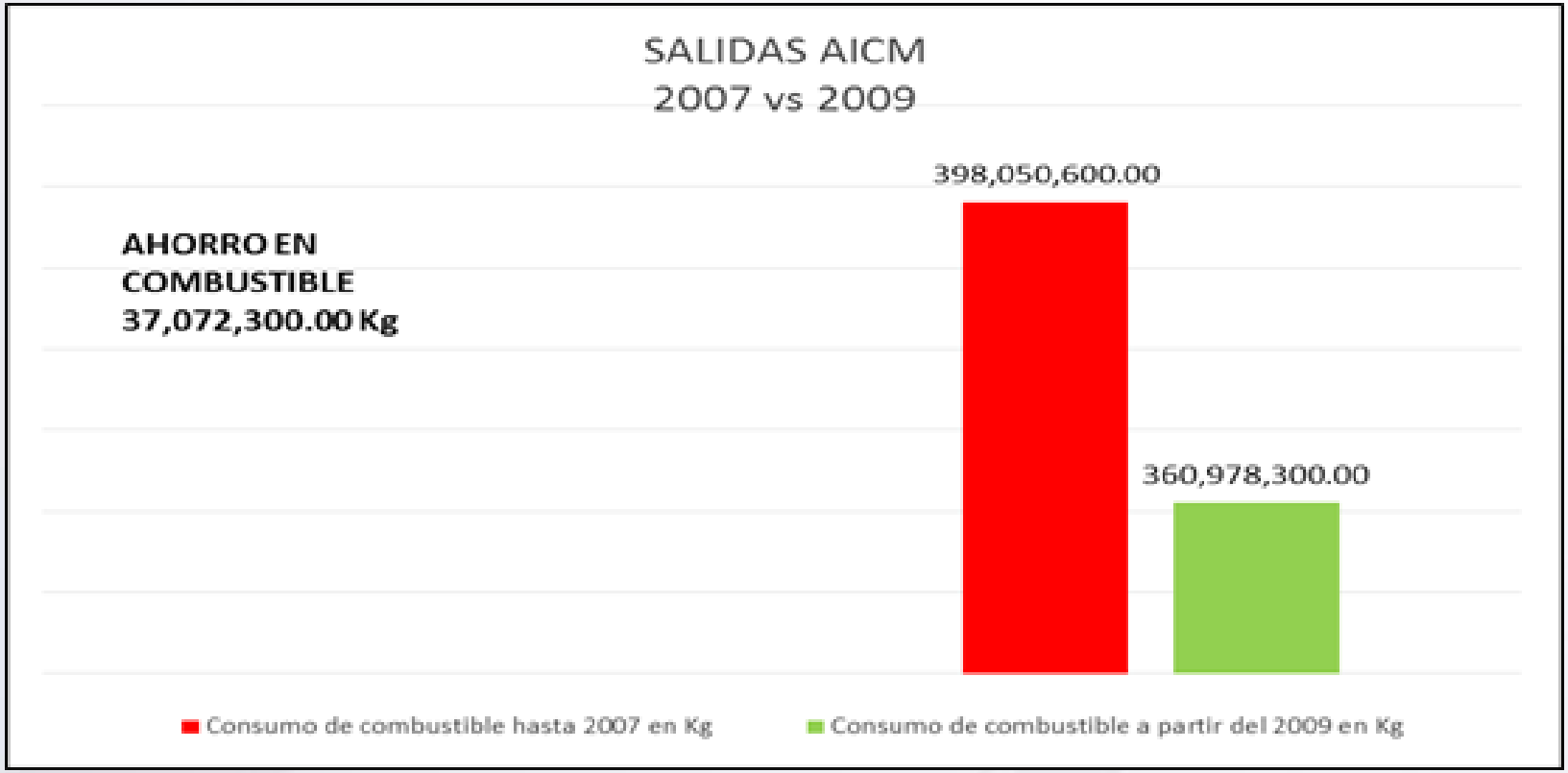
APROXIMACION

2007

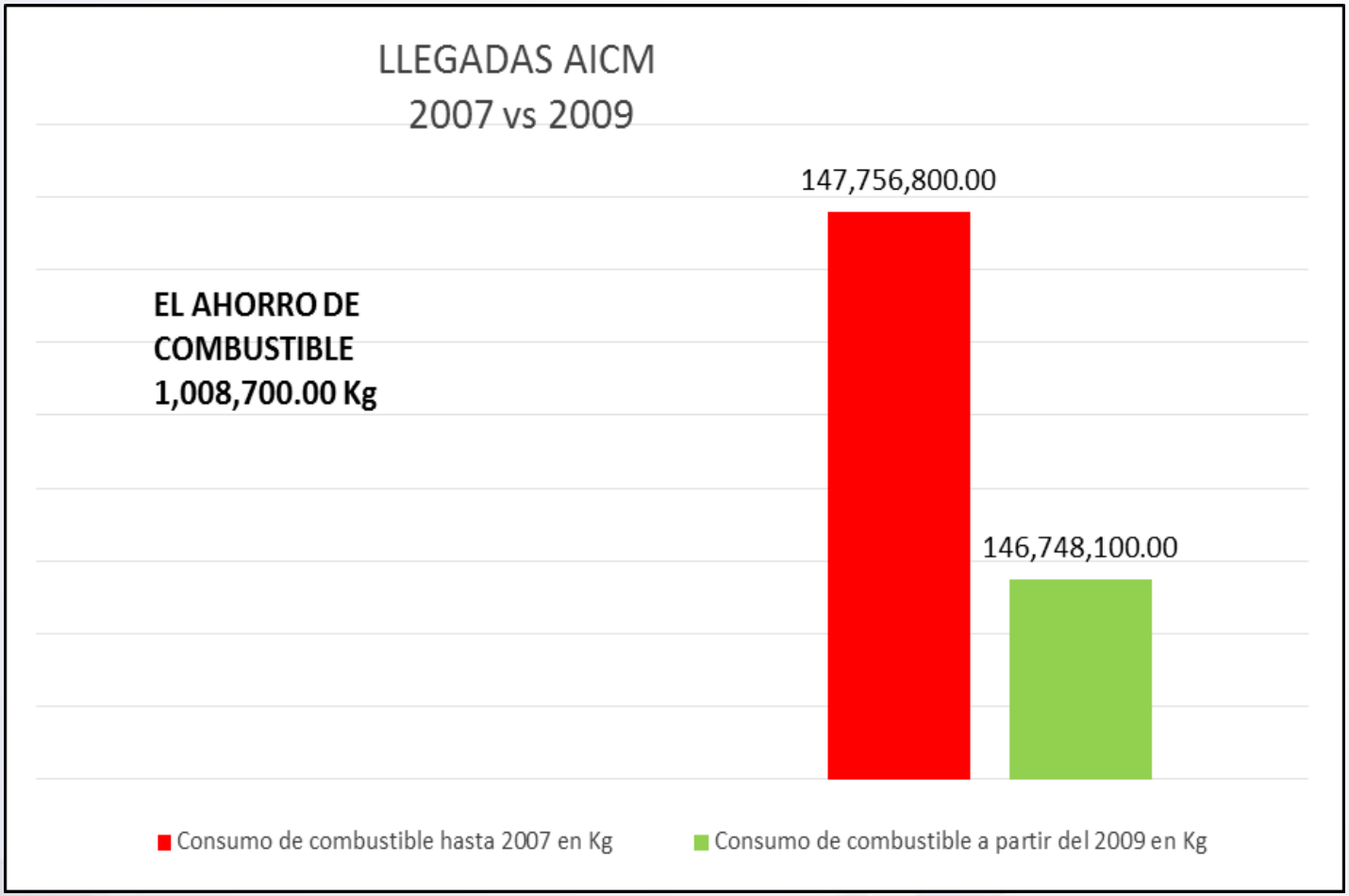


2009





9.31% ahorro en combustible



0.68% ahorro en combustible

More information

- **http://www.icao.int/environmental-protection/Pages/Tools.aspxE-mail**

Questions?

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