First slide: Header section with details of the event:

**FAI- CIACA**

Commission Internationale des Aéronefs de Construction Amateur

Experimental and Amateur Built Commission

110th General Conference

Bali - Indonesia

Second slide: Title and list of contents:

- **CIACA Worldwide**
- **Experimental vs. >100 NAC's**
- **New Technologies and new Power Sources**
- **FAI CIACA Records, Competitions and SC's**
- **Awards of CIACA**
- **Youth educational programms**

Third slide: Map showing countries participating in CIACA and NAC's:

- Australia
- Austria
- Belgium
- Brazil
- Canada
- Chile
- China
- Costa Rica
- Cyprus
- Denmark
- Germany
- Finland
- France
- Guatemala

Fourth slide: Title and list of new technologies and sources:

- **New Technologies and new Power Sources**
- **Human powered take-off/Hang Glider**
- **Electric Experimental Aircraft**
- **Solar - Powerline**
- **New Batteries**
- **Hydrogene (HY4)**

- **X - Competitions and Records**
- **Ecology**

Fifth slide: Title and text about human powered new materials:

- **Human Powered New Materials**

- Many records are achieved every year

Sixth slide: Title and text about the Solar Impulse SC13:

- **Solar Impulse SC13 – World Surround Rule by CIACA – Observers.**

- The mission is completed and we are looking for new projects. Congratulations to Bertrand Piccard and André Borschberg!
**Electric - Advantages:**

- High efficiency factor of 95%
- Light weight (20-30 kg)
- Low emissions (noise, CO2, NOx etc.)
- Low vibrations
- No power loss with increasing altitude
- Longer maintenance intervals

**Old Engines with Carburants:**

- Low efficiency factor of ~35%
- Heavy weight
- High vibrations
- High noise level

**Electric Experimental Aerobatic Aircraft #1**

**Silence Aircraft Twister**

First electric aircraft performing aerobatics in Europe

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight engine</td>
<td>13kg</td>
</tr>
<tr>
<td>Weight cell</td>
<td>140kg</td>
</tr>
<tr>
<td>Weight batteries</td>
<td>160kg</td>
</tr>
<tr>
<td>Never exceed speed</td>
<td>300km/h</td>
</tr>
</tbody>
</table>

Many Records attempts - Competitions following as well

**Evolaris – Votec**

Aerobatic Experimental Aircraft

**Technical data:**

- Wing span: 6.30m
- Length: 6.00m
- Wing area: 7.32m²
- Empty weight: 440kg
- MTOW: 680kg
- Roll rate: about 440°/sec
- G-load: +/-10g
- Power: 147-162kW/200-220PS
- Stall speed: 65mph
- Speed up to: 270mph

**Solar Stratos - Solar Cells**

Endlich flügge geworden! Mit der HY4 des Deutschen Zentrums für Luft- und Raumfahrt (DLR) entstehen keinerlei Abgaspartikel und kein CO2, wenn die HY4 fliegt.

**HY4 - Hydrogene**
Awards and Competitions of CIACA

∞ Competitions at the Fly-Ins all over the World!
∞ New Technologies used
∞ Best built Aircraft + others
∞ Phoenix + Henri Mignet Diplomas

Phoenix Diploma

∞ Phoenix Diploma
∞ 1 nomination: Philip Cozens – Royal Aero Club (UK)

Phoenix Group Diploma

∞ Phoenix Group Diploma
∞ 1 nomination: David & Rick Bremner and Theo Willford Royal Aero Club (UK)

Building Competitions

Gyrocopters are, similar to helicopters, a very attractive Aircraft

This Magni-Copter has been built within 4 days at the World Air Games 2015 in Dubai

GPS based Precision Flights

∞ virtual parcour
∞ GPS based Precision Flight and –Landing competition
Raron FlyIn May 2016
Langenthal August 2016

9. Ciaca Educational and Social Initiatives

∞ Children building Aircraft at:
  † World Air Games, Dubai
  † On many national Experimental Meetings

Building Competitions

Gyrocopters are, similar to helicopters, a very attractive Aircraft

This Magni-Copter has been built within 4 days at the World Air Games 2015 in Dubai
**Date and place of next Annual General Meeting**

∞FAI CIACA 42th AGM is planned for AERO 2017 Friedrichshafen

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**Experimental Volumes**

<table>
<thead>
<tr>
<th>Experimental Aircraft</th>
<th>Cost per unit (USD)</th>
<th>Man power (CHF)</th>
<th>Total CHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ / unit</td>
<td>50'000</td>
<td>150</td>
<td>1'50</td>
</tr>
<tr>
<td>Europe</td>
<td>12'000</td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>Worldwide</td>
<td>70'000</td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>New AC p.a.</td>
<td>50'000</td>
<td>2'500</td>
<td>2'100'000'000</td>
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</tbody>
</table>

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**Experimental Aircraft**

<table>
<thead>
<tr>
<th>Place</th>
<th>Cost</th>
<th>35% = Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ / unit</td>
<td>1</td>
<td>50'000</td>
</tr>
<tr>
<td>Europe</td>
<td>12'000</td>
<td>600'000'000</td>
</tr>
<tr>
<td>Worldwide</td>
<td>70'000</td>
<td>3'500'000'000</td>
</tr>
<tr>
<td>New AC p.a.</td>
<td>50'000</td>
<td>2'500'000'000</td>
</tr>
<tr>
<td>Hours / Project</td>
<td>2'500</td>
<td>time excluded</td>
</tr>
</tbody>
</table>