

***Report from JCWG -2008  
TC82/TC21/TC88/TC105/64  
(IEC TS 62257)***

***Recommendations for small renewable energy  
and hybrid systems for rural electrification***



Preparation: A. Schmitt – Convenor

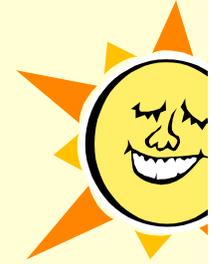
France

Presentation: Ted Spooner

Australia

TC 82 Meeting  
San Francisco May 2008

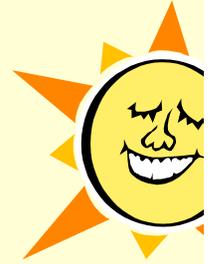




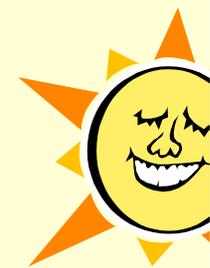
***Sorry !  
For budget reasons  
No short trip in the rural world this  
time !***



# *Summary of the presentation*

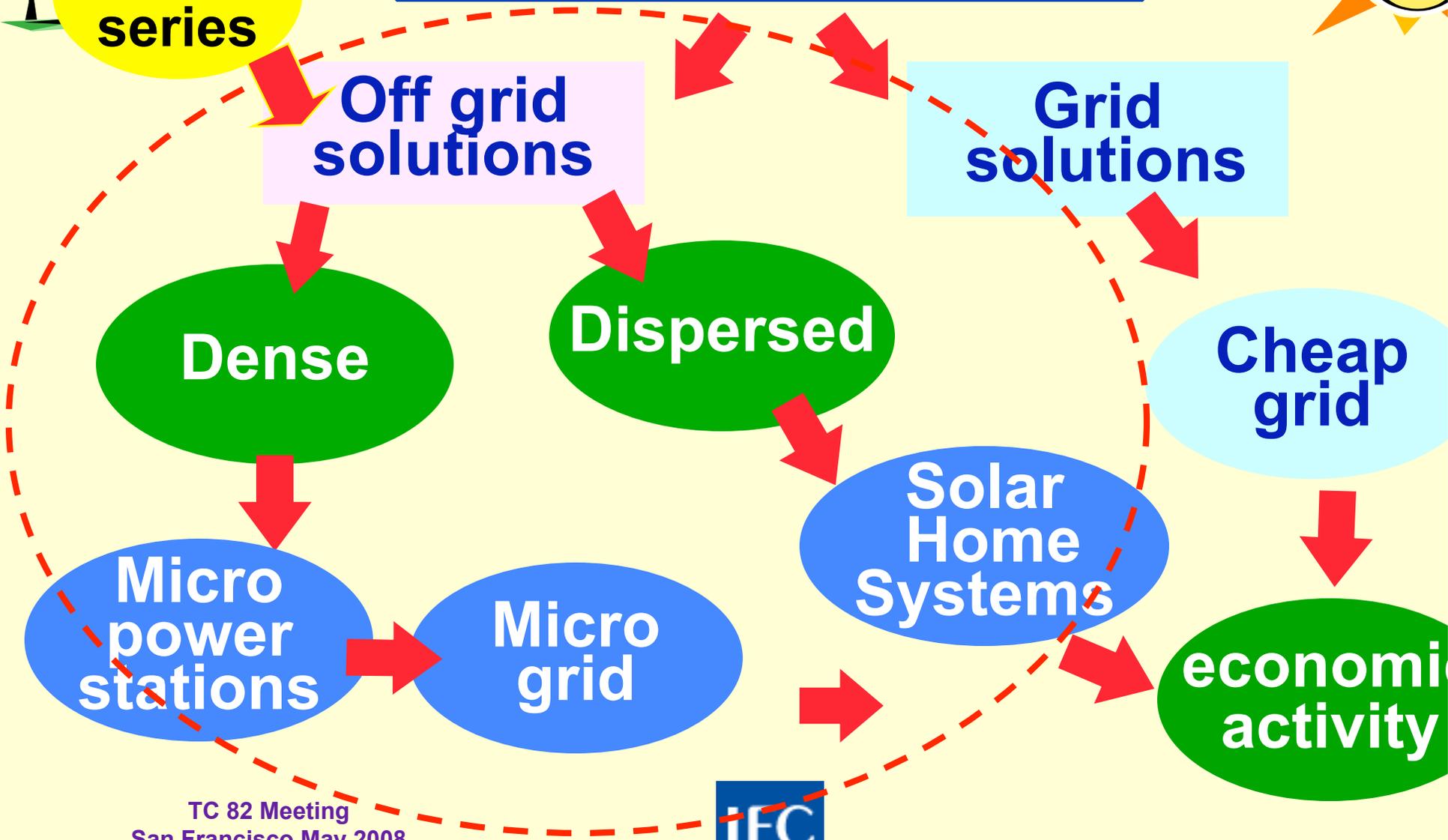


- ❖ Rural electrification; keypoints
- ❖ Purpose of the IEC TS 62257
- ❖ Organization within the IEC, JCWG and participants
- ❖ Structure and summary of the IEC TS 62257
- ❖ Planning and progress report



# Electrification Target

62257 series

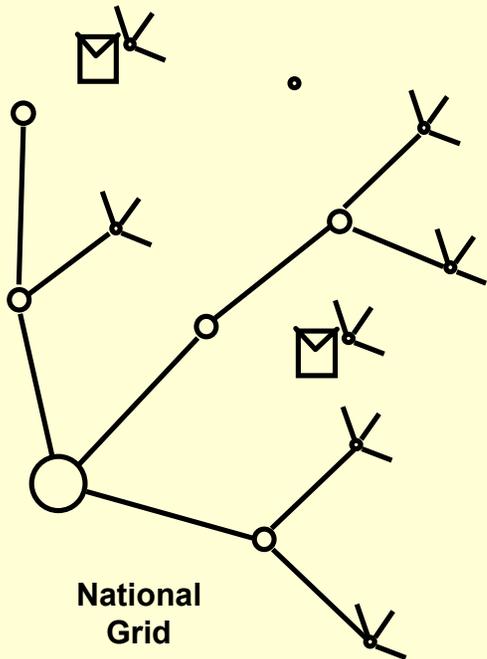
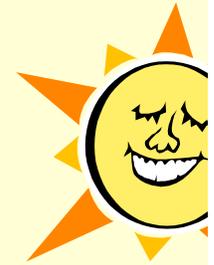


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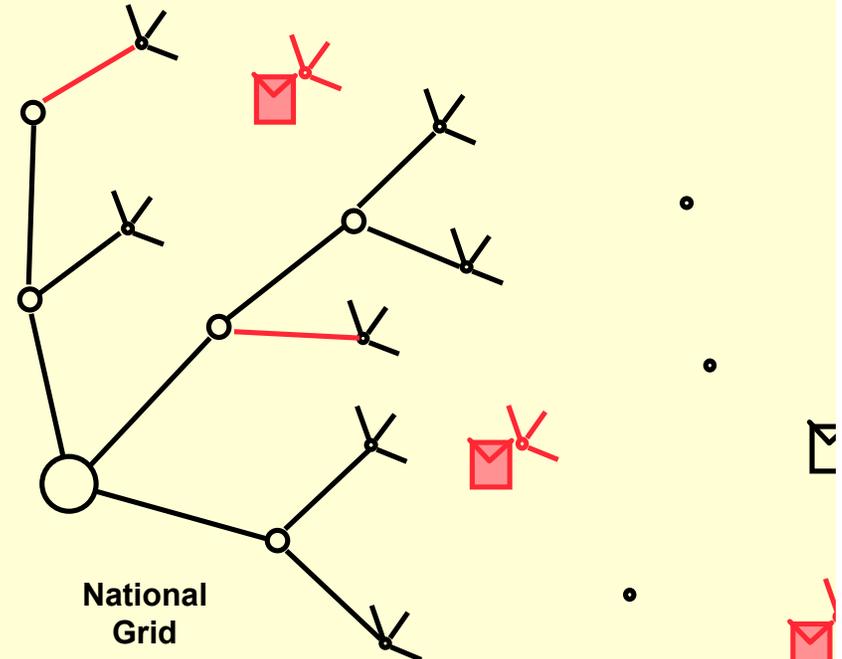
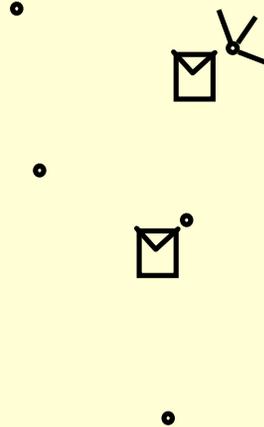


# Electrification Implementation Strategy



National  
Grid

State of electrification at year n

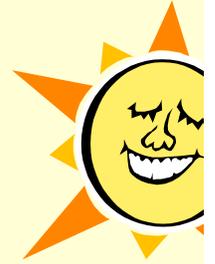


National  
Grid

State of electrification at year n+



## General (1)

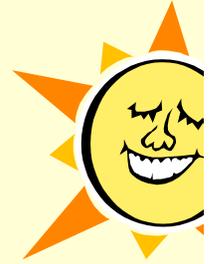


### ❖ IEC 62257 series - Why? Status in 1996:

- No existing technical references and dedicated documents
- Existing documents didn't match the needs
- Poor quality level of systems
- Bad design
- No « off the shelf » systems
- One system = one design
- Poor cost/benefits ratio



## *General (2)*

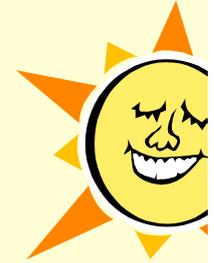


### ❖ **IEC 62257 series - What?**

- Technical specifications (and not International standard)
- Translation into TS of the REP methodology
- Consistent set of documents (from energy needs identification to equipment specification)
- Developed from PAS 62111 (1999)



## General (3)



### ❖ IEC 62257 series – for whom?

- Help to
  - choose the right system for the right place;
  - design the system;
  - operate and maintain the system.
- For: project implementers, project contractors, project supervisors, engineering consultants, installers, operators, etc.



# Organization of the JCWG within the TC

82

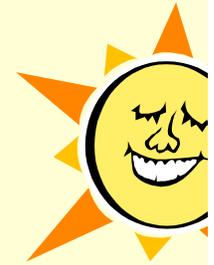


## ❖ JCWG: a transverse WG

- Development of doc in cooperation with WG of several TCs (TC 21, 88, 64, 34, etc.)
- Development of doc as a working group for new topics/no existing WG
- Responsible for producing the final documents and keeping the original frame of mind of the PAS 62111

## ❖ 14 registered countries

- Australia, Canada, China, Denmark, France, Germany, Italy, Japan, Korea, South Africa, Spain, Sweden, United Kingdom, USA



# IEC/PAS 62111

Edition 1.0  
1999-07

Reference number  
IEC/PAS 62111:1999

**ICS 27.160**

Open file  
"iecpas62111{ed1.0}en.pdf"  
using the Acrobat® Reader.

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International Electrotechnical  
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PO Box 131, CH-1211 Geneva 20,  
Switzerland

**PUBLICLY AVAILABLE SPECIFICATION**

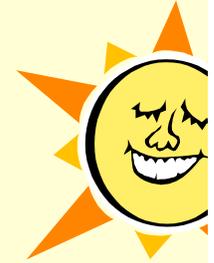


INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION





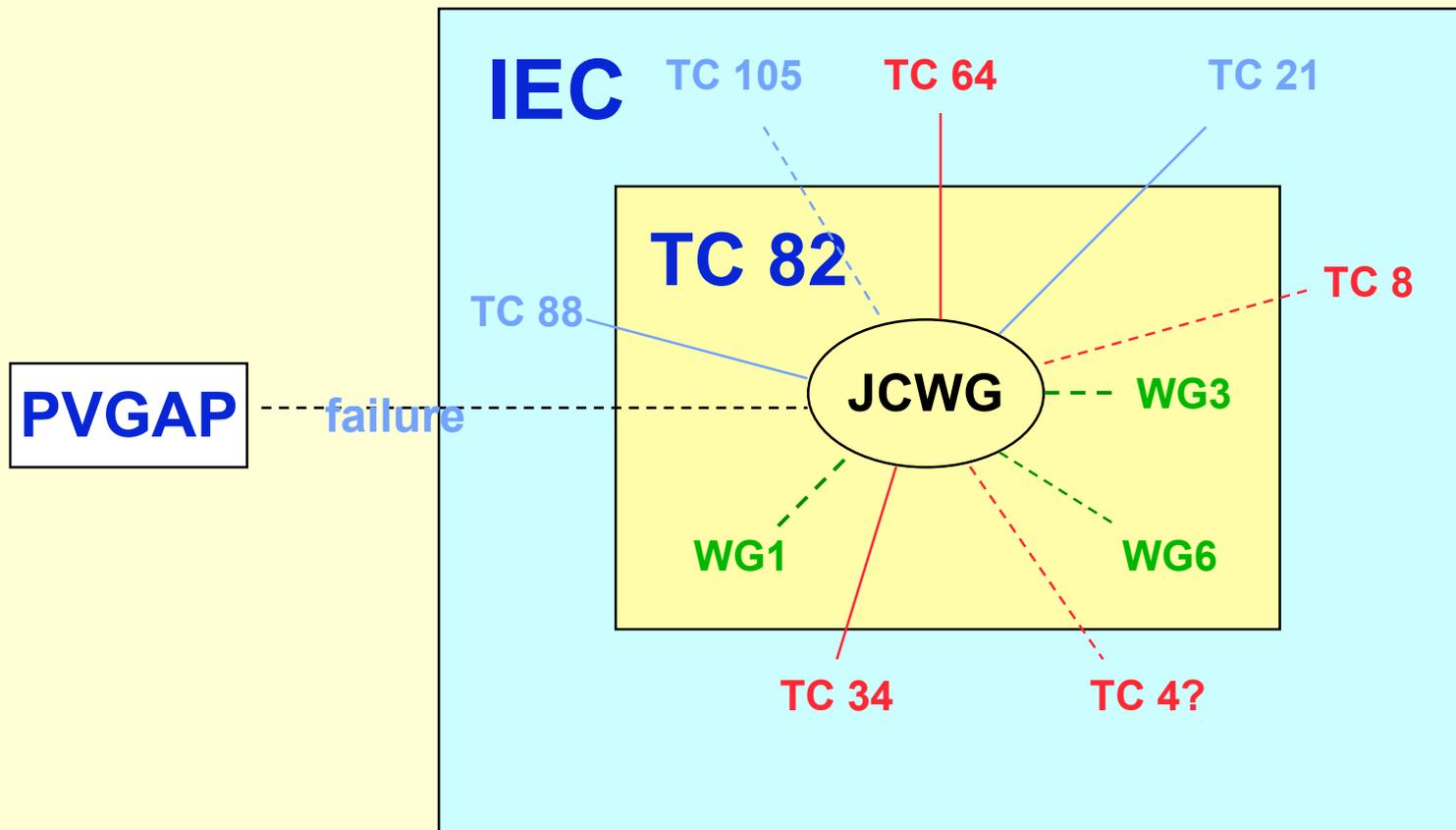
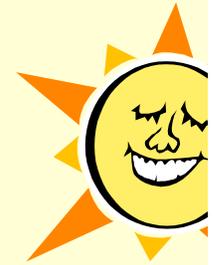
## ***Structure and summary of the IEC 62257 (1)***



- ❖ **62257 series = 31 (initially!) technical specifications structured into 3 parts:**
  - Introduction to rural electrification
  - Project management / implementation guideline
  - Technical specifications for components and systems

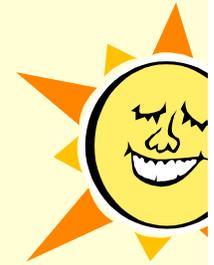


# JCWG 82/88/21/105/64 cooperation within the IEC and within the TC82





# IEC 62257 (1)



## General

IEC	Title	In charge	PT /TC involved	Status (06/10)
IEC/TS 62257-1	General introduction to rural electrification	JCWG		Published 2003-08



# IEC 62257 (2)

## Project management / implementation guidelines



IEC	Title	In charge	PT/TC involved	Status (06/10)
IEC/TS 62257-2	From requirements of users to a range of electrification systems	JCWG		Published 2004-05
IEC/TS 62257-3	Project development and management	JCWG		Published 2004-11
IEC/TS 62257-4	System selection and design	JCWG		Published 2005-07
IEC/TS 62257-5	Safety rules –protection against electrical hazards	JCWG		Published 2005-07
IEC/TS 62257-6	Acceptance, operation and maintenance	JCWG		Published 2005-06



# IEC 62257 (3)

## Technical specifications

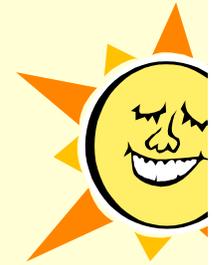


IEC	Title	In charge	TC involved	Status (06/10)
IEC/TS 62257-7	Generators	JCWG	JCWG	Published 2008-04
IEC/TS 62257-7-1	Photovoltaic generators	JCWG +	PT1 TC82 WG3) /TC64	Published 2006-12
IEC/TS 62257-7-2	Wind turbines	JCWG	PT5 TC82/TC88	Draft
IEC/TS 62257-7-3	Generator set	JCWG		Published 2008-04
IEC/TS 62257 7 4	Microhydraulic power station	JCWG	TC 4 ?	Draft



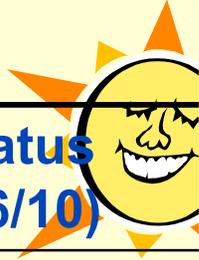
# **IEC 62257 (4)**

## **Technical specifications**



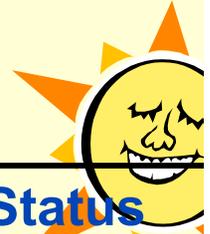
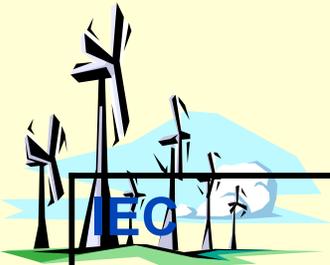
<b>IEC</b>	<b>Title</b>	<b>In charge</b>	<b>TC involved</b>	<b>Status (06/10)</b>
62257 8	Batteries and energy managers	JCWG		Cancelled
IEC/TS 62257-8-1	Selection of batteries and battery management systems for stand-alone electrification systems	JCWG +	PT2 TC82 (WG6) /TC21	Published 2007-06
IEC/TS 62257-8-2	Energy managers for stand-alone electrification systems	JCWG	PT2 TC82 (WG6) /TC21	Discussion WG6

# IEC 62257 (5) Technical specifications

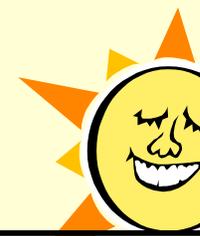
IEC	Title	In charge	TC involved	Status (06/10)
IEC/TS 62257 9	Integrated systems	JCWG		Not launched
IEC/TS 62257-9-1	Micro powerplants	JCWG +	TC82 /TC64	APUB
IEC/TS 62257-9-2	Microgrids	JCWG +		Published 2006-10
IEC/TS 62257-9-3	User's interface	JCWG +		Published 2006-10
IEC/TS 62257-9-4	Indoor installations	JCWG +		Published 2006-10
IEC/TS 62257-9-5	Selection of PV lantern	JCWG		Published 2007-06
IEC/TS 62257-9-6	Selection of Individual PV Electrification System	JCWG	TC82 (WG3)	CDTS

# IEC 62257 (6) Technical specifications



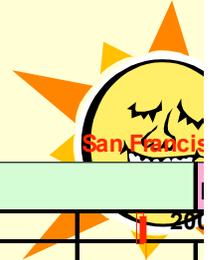
IEC	Title	In charge	TC involved	Status (06/10)
IEC/TS 62257-10	Converters	JCWG +	TC82 (WG6)	To be discussed with WG6
IEC/TS 62257-11	Considerations for rural electrification systems extension	Discussion with TC8 (no news since the contact in 2006)		
IEC/TS 62257-11-1	Connection of a new micro powerplant to an existing microgrid			
IEC/TS 62257-11-2	Interconnection of microgrids			
IEC/TS 62257-11-3	Connection of a cluster of microgrids to a regional grid			

# IEC 62257 (7) Technical specifications



IEC	Title	In charge	TC involved	Status (06/10)
IEC/TS 62257-12	Demandside / appliances	JCWG		cancelled
IEC/TS 62257-12-1	Integrated compact fluorescent lamps and household lights	JCWG +	PT4 TC8/TC34	Published 2007-06
IEC/TS 62257-12-2	TV sets and consumer electronics		TC 108 ?	cancelled
IEC/TS 62257-13	Miscellaneous : specific loads	To be defined	TC82 (WG3)	Not launched
IEC/TS 62257-13-1	Water pumping,	WG3	TC82 (WG3, JCWG)	Discussion WG3

# Overview progress status



TC 82 General meetings

Sydney

Frankfurt

Beijing

Tokyo

San Francisco

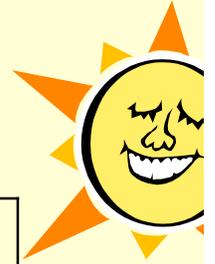
IEC 62257 series	Achieved														
	2001		2002		2003		2004		2005		2006		2007		2008
IEC 62257-1	draft	CD	DTS	DTS	DTS	published									
IEC 62257-2	draft	draft	CD	CD	DTS	DTS	DTS	published							
IEC 62257-3	draft	draft	CD	CD	DTS	DTS	DTS	published							
IEC 62257-4			draft	draft	CD	CD	DTS	DTS	DTS	published					
IEC 62257-5			draft	draft	CD	CD	DTS	DTS	DTS	published					
IEC 62257-6			draft	draft	CD	CD	DTS	DTS	DTS	published					
IEC 62257-7											draft	draft	CD	DTS	published
IEC 62257-7-1						draft	draft	CD	DTS	DTS	DTS	published			
7-1 new version													draft	draft	draft
IEC 62257-7-2							draft	draft	draft	draft	draft	draft	draft	draft	draft
IEC 62257-7-3							draft	draft	draft	CD	CD	DTS	DTS	DTS	published
IEC 62257-7-4							draft	draft	draft	draft	draft	draft	draft	draft	draft
IEC 62257-8											May be cancelled				
IEC 62257-8-1							draft	draft	draft	CD	CD	DTS	DTS	published	
IEC 62257-8-2											To be planned with WG6				
IEC 62257-9											May be cancelled				
IEC 62257-9-1									draft	draft	CD	CD	DTS	DTS	published
IEC 62257-9-2							draft	draft	CD	DTS	DTS	published			
IEC 62257-9-3							draft	draft	CD	DTS	DTS	published			
IEC 62257-9-4							draft	draft	CD	DTS	DTS	published			
IEC 62257-9-5									draft	DTS	DTS	published			
IEC 62257-9-6									draft	draft	CD	CD	DTS	DTS	
IEC 62257-10											To planned with WG6				
IEC 62257-11											To be transferred to TC 8 ?				
IEC 62257-11-1											To be transferred to TC 8 ?				
IEC 62257-11-2											To be transferred to TC 8 ?				
IEC 62257-11-3											To be transferred to TC 8 ?				
IEC 62257-12											May be cancelled				
IEC 62257-12-1							draft	draft	CD	CD	CD	CD	published		
IEC 62257-12-2											May be cancelled				
IEC 62257-13											May be cancelled				
IEC 62257-13-1											To planned with WG3				

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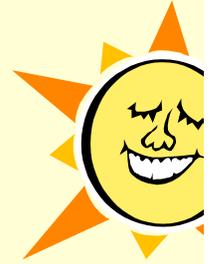
# 62257 Progress Status



Published	15
APUB	1
CDTS	1
CD	1 (RVC)
Draft	2
Not launched	1
<b>Total 1</b>	<b>21</b>
Cancelled	3
Discussion WG3 / 6	3
Transferred	4
<b>Total 2</b>	<b>31</b>



# 62257 - Matters to be discussed

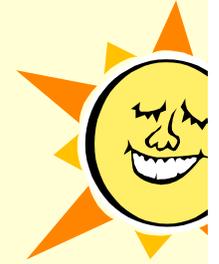


- ❖ Leadership of the JCWG after 2008 ???
- ❖ More and more interest from national committees...
- ❖ ...But less and less participants to JCWG (Motivation of TC 82 members to participate for topics other than PV)
- ❖ 62257 series = technical specifications + guidelines = absolute necessity : African testimony and others
- ❖ Keep the 62257 series consistency even after transforming TS into standards (selection / comparison VS certification)
- ❖ Coordination with WG3 and 6 : to produce TS quickly and standards later (Converters, charge controller, water pumping)
- ❖ Contact with Richard Schomberg TC 8 for part 11



# 62257

## *Dissemination activities*



- ❖ IEC Centenary Event in Nairobi – Kenya – February 2006)
- ❖ Translation into Chinese and Romanian national standards
- ❖ UTE workshop on rural electrification (Paris France) within the Paris RE Conference and exhibition – June 2006
- ❖ IEC news
- ❖ Affiliate programme
- ❖ IEC Workshop in Paris Oct 2007...



## JCWG Membership (registered) :

**Mr. Alain Schmitt (FR) Convenor**

**Mr. Felice APICELLA (IT)**

**Mr. Ian BARING-GOULD (US)**

**Mr. Thomas BASSO (US)**

**Dr. Ing. Guido CLERICI (IT)**

**Dr. Joseph GALDO (US)**

**Mr. Philippe JACQUIN (FR)**

**Mr. Jan G JOHANSSON (SE)**

**Mr. Martin KLEIMAIER (DE)**

**Mr. Peter KREMER (DE)**

**Monsieur Pierre LENAIN (FR)**

**Mr. C. R. Bob LLOYD (NZ)**

**Mr. Per LUNDSAGER (DK)**

**Mr. Sylvain MARTEL (CA)**

**Mr. Bernard MCNELIS (GB)**

**Dr. Je-Myung OH (KR)**

**Monsieur Hervé ROCHEREAU (FR)**

**Mr. Ted SPOONER (AU)**

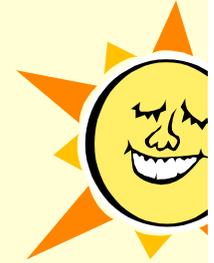
**Monsieur Charles STREB (FR)**

**Mr. Kenji UCHIHASHI (JP)**

**Mr. Xavier VALLVÉ (ES)**

**Mr. Nigel WILMOT (AU)**

**Senior Engineer Zuoxu ZHAI (CN)**



**To be updated ?**



Thank you for  
your attention

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San Francisco May 2008