

The outline of Advanced High Density Disc Systems

1. The background and purpose

China disc market has been developing very fast in last ten years, there are CD, VCD, SVCD, DVD market with different consumers requirements. According to demands and comments from china customers, all disc products are still not enough to fulfill all requirements of customers. Here is a example, some Chinese customers are very welcome to have SVCD format, and it have created huge market of SVCD players, but they have to buy three discs for one movie, so it limited the developing and extending of SVCD market in China.

Some China customers also like to watch long term TV series drama, for this kind of video programs they do not need have to watch drama with higher resolution of TV like DVD, the resolution of SVCD (2/3 D1) is good enough, but they have to buy so much SVCD discs for one long term TV series drama, So they need a disc format which is long time playing with middle level of resolutions.

We also know that Beijing made successful application for holding Olympic games in 2008. According to China government project schedule, Digital TV, High definition digital TV broadcasting would be available before 2005, So we need a disc format which is fulfill all requirements of customers in future. New disc format system will be compatible with multi video format including high resolution digital TV format.

We still think that China is developing country; the customers have special requirements, which is different from developed country. There are many other countries on the world, which is similar to China.

The Alliance of China Optical Disc Technology is established in Aug.1999 (simplified as CODA). All members are come from disc and player manufacturers, institute, software Publishers, and distributors in the field of optical discs in China. CODA has begun to develop new disc format, which is more suitable for requirements of China all customers since Aug. 1999.

Now, CODA disc systems specification called Advanced High Density Disc Systems (version 0.9) is available, function test disc and disc player have been made. All members of CODA are satisfied with function and specification of Advanced High Density Disc Systems.

All A/V software publishes and distributors in China have announced that they will support this disc format.

Now, China MII has announced that China government supports this format, and support that Advanced High Density Disc Systems would become national standard.

2. The prediction of China market: see table

	2002	2003	2004	2005
Disc player (in million)	3	5	8	10
Discs (in million)	60	150	300	800

3. Brief introduction of specification

Physical format	DVD Physical format				
File system	Micro UDF 1.02				
Data System	MPEG-2 system stream / program stream Maximum program_mux_rate : 20.16 Mbps				
Video	Number of streams : 1 Compression : Complies with MPEG-2 Bit rate: max 18 Mbps or less Video format :				
	Vertical_size	Horizontal_size	Aspect_ratio	Frame_rate	progressive
	1080	1920	16:9	29.97/30	0
	720	1280	16:9	29.97/30	0
	720	1280	16:9	29.97/30	1
	576	720	4:3 or 16:9	25	1
	480	720	4:3 or 16:9	29.97/30	1
	576	720	4:3 or 16:9	25	0
	480	720	4:3 or 16:9	29.97/30	0
	576	480	4:3	25	0
480	480	4:3	29.97/30	0	
Audio	Data specification of a stream:				
		Linear PCM		Enhanced Audio Code	
	Sampling frequency	44.1/48/96 kHz		44.1/48 kHz	
	bits per sample	16/20/24		16	
	bit rate	6.144 Mbps		684 Kbps	
	Number of channels	8 max		5.1 max	
Sub-picture	Number of streams: 8 Data type: RLC Data size of a picture: 1,2,4,8 bit / pixel Display area:				
	1920*1078	1280*718	720*478	720*573	
	Colors: max 256 Display control by frame: timing				
User data	Any data can be stored in the extension directory				

Note: The specification still can be changed before final version.

4. The current situation of Advanced High Density Disc Systems

- The standard version 0.9 β has been finished.
- The function test disc has been made; basic disc authoring system has been established.
- The function disc player has been made basically.

5. China National committee would like to submit the Advanced High Density Disc systems to IEC/TC100 committee to become IEC international standard.

- China will access WTO in 2001, China will be continuing reforming and Opening policy, China need to exchange software programs with developing and developed countries on the world.
- The Advanced High Density Disc Systems, which becomes international standard will be advantageous that foreign disc and disc players manufacturers come into china market ,and make competition with Chinese company with opening, fair and equitable regulation.
- The issues about patent and IPR in the standard, will be dealt with international convention.
- If IEC/TC100 Committee approves proposal, China side will do best to make procedure with IEC TC100 stipulations, and also welcome representatives from other countries national committee to join project team.



100/XXX/NP

NEW WORK ITEM PROPOSAL

Proposer China	Date of proposal 2001-09-10
TC/SC TC100	Secretariat Netherlands
Data of circulation 2001-9-22	Closing date for voting

A proposal for a new work item within the scope of an existing technical committee or subcommittee shall be submitted to the Central Office. The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information. The proposer may be a National Committee of the IEC, the secretariat itself, another technical committee or subcommittee, an organization in liaison, the Committee of Action or one of the advisory committees, or the General Secretary. Guidelines for proposing and justifying a new work item are given in ISO/IEC Directives, Part 1, Annex C (see extract overleaf). **This form is not to be used for amendments or revisions to existing publications.**

The proposal (to be completed by the proposer)

Title of proposal Advanced High Density Disc Systems		
<input checked="" type="checkbox"/> Standard		<input type="checkbox"/> Technical Report
Scope (as defined in ISO/IEC Directives, Part 3, 6.2.1) This project is intended to make Advanced High Density Disc Systems to become IECXXXXX international standard		
Purpose and justification, including the market relevance and relationship to Safety (Guide 104), EMC (Guide 107), Environmental aspects (Guide 109) and Quality assurance (Guide 102) . (attach a separate page as annex, if necessary) Advanced High Density Disc Systems is more suitable for international market, and it would create a huge international market, it represents the need of disc and player Manufacturers and customers for software program exchange.		
Target date	For first CD 2002-4	For IS< 2003-4
Estimated number of meetings 4	Frequency of meeting 2 per year	Date and place of first meeting. 2002-4, China
Proposed working methods It requires to make function test disc and player for verifying systems standard	<input checked="" type="checkbox"/> E-mail	<input type="checkbox"/> ftp
Relevant documents to be considered IEC 13818, ISO 13346 ECMA JTC1		
Relationship of project to activities if other international bodies		
		Need for coordination within ISO or IEC
Preparatory work Check one of the two following boxes <input type="checkbox"/> A draft is attached for vote and comment <input checked="" type="checkbox"/> An outline is attached We nominate a project leader as follows in accordance with ISO/IEC Directives, Part 1, 2.3.4 (name, address, fax and e-mail): Dr. Hao Jie Beijing E-world Technology Co. Ltd, P R China. Add: BinHe Mansion A-F6. No. 1 CheDao Gou street, Hai Dian District, Beijing China. Tel: 86-10-68716939 Fax: 86-10-68716922, Email: haochieh@davform.com, http://www.davform.com.		
Concerns known patented items (see ISO/IEC Directives, Part 2) <input type="checkbox"/> yes <input checked="" type="checkbox"/> no		Name and/or signature of the proposer China National Committee

Comments and recommendations from the TC/SC officers

Comments with respect to the proposal in general, and recommendations thereon
1) Work allocation <input type="checkbox"/> Project team <input type="checkbox"/> New working group <input type="checkbox"/> Existing working group no:
2) Draft suitable for direct submission as <input type="checkbox"/> CD <input type="checkbox"/> CDV
3) General quality of the draft (conformance with ISO/IEC Directives, Part 3) <input type="checkbox"/> Little redrafting needed <input type="checkbox"/> Substantial redrafting needed <input type="checkbox"/> no draft (outline only)
4) Relationship with other activities In IEC In other organizations
Other remarks
Remarks from the TC/SC officers
Remarks from the Sector Board

Elements to be clarified when proposing a new work item

Title

Indicate the subject matter of the proposed new standard.

Indicate whether it is intended to prepare a standard, a technical report or an amendment to an existing standard.

Scope

Give a clear indication of the coverage of the proposed new work item and, if necessary for clarity, exclusions.

Indicate whether the subject proposed relates to one or more of the fields of safety, EMC, the environment or quality assurance.

Purpose and justification

Give details based on a critical study of the following elements wherever practicable.

a) The specific aims and reason for the standardization activity, with particular emphasis on the aspects of standardization to be covered, the problems it is expected to solve or the difficulties it is intended to overcome.

b) The main interests that might benefit from or be affected by the activity, such as industry, consumers, trade, governments, distributors.

c) Feasibility of the activity: Are there factors that could hinder the successful establishment or general application of the standard?

d) Timeliness of the standard to be produced: Is the technology reasonably stabilized? If not, how much time is likely to be available before advances in technology may render the proposed standard outdated? Is the proposed standard required as a basis for the future development of the technology in question?

e) Urgency of the activity, considering the needs of the market (industry, consumers, trade, governments etc.) as well as other fields or organizations. Indicate target date and, when a series of standards is proposed, suggest priorities.

f) The benefits to be gained by the implementation of the proposed standard; alternatively, the loss or disadvantage(s) if no standard is established within a reasonable time. Data such as product volume or value of trade should be included and quantified.

g) If the standardization activity is, or is likely to be, the subject of regulations or to require the harmonization of existing regulations, this should be indicated.

If a series of new work items is proposed, the purpose and justification of which is common, a common proposal may be drafted including all elements to be clarified and enumerating the titles and scopes of each individual item.

Relevant documents

List any known relevant documents (such as standards and regulations), regardless of their source. When the proposer considers that an existing well-established document may be acceptable as a standard (with or without amendments), indicate this with appropriate justification and attach a copy to the proposal.

Cooperation and liaison

List relevant organizations or bodies with which cooperation and liaison should exist.

Preparatory work

Indicate the name of the project leader nominated by the proposer.