# METI COMPLEX MEDIA PROJECT- Work Plan January 2004

## Six Key Activity Areas

The following areas will have a different emphasis at times throughout the expected three year project.

- Technical Issues Within the Project.
- Promotion/Education.
- Standardisation Work Item Proposal(s).
- IP Issues.
- Draft Standard(s).
- Technology Partners.

Each of these areas is discussed in more detail below. What follows is not a precise plan for the first six months, but an initial outline plan for the complete project as seen from the start-up position. The few dated items (e.g. **2004-02 # 2**) are scheduled activities for the period. These are also listed in the schedule (Annex A). At this stage, no assumptions are made about the assignment of work activities other than the fact that not all can be undertaken by Praxis Consultants.

Technical Issues Within the Project

We see the technical issues as being key to being able to develop the working draft to a professionally high standard, and to minimise the number of iterations within the various committees. Therefore, it will be necessary to establish a procedure where these technical points can be queried and to establish them at two levels. The first level is a simple technical response from the partners in the METI project, so that some parameter values can be put into the standard and other documents.

The second stage is more of a proof of concept, which probably requires demonstration both within the project, and also independently (possibly in Europe).

- **2004-02 # 2** : Establish procedure for dealing with technical queries, a few at a time. The turn-round time should ideally be 7 days.
- Establish procedures for proof of concept tasks in Japan and for sharing the results.
- Establish procedures for independent proof of concept tasks in Europe and for sharing the results.

Some of the issues currently identified are:

- A technical definition of the re-writeable substrate.
- A technical definition of the YAG laser product.
- A temperature range at which the YAG laser encodes data and erases data.
- A description of the YAG encoding and erasing process.
- The distance of the YAG laser to the label.
- The specification of any constraints on the angular plane of the label relative to the YAG laser (effectively X, Y and Z tolerances).
- Implications for the graphical layout, with particular reference to whether the graphics can be sub-divided into "permanent" components and re-writeable components. The permanent components would be elements such as logos, which would mean that the surface area to be erased

would be less than the label size and probably require some precision positioning.
- Constraints on the graphical layout, in terms of the YAG laser process interfering with the RF tag (both the chip and the antenna).
- This leads to issues of how to preserve any integrity through minimal damage of different types of RF tag and antenna design.
- Any constraints on the frequency of the RF air interface.
- Any physical constraints on the RF tag in terms of chip design and position and aerial design and position.
- The range of X dimensions for bar code symbologies and 2-D symbologies that can be supported by the YAG laser encodation process.
- Range of colours that can be used for printing the bar code (effectively the reflectance range of the dark bars).
- Symbol contrast parameters.
- The speed for erasing and encoding a label using the YAG technology. Possibly based on a typical credit card sized label, with other variable parameters identified.
- Suppliers in Japan, Europe and North America of the type of YAG lasers required for implementing the system.

This list will continually evolve, and the current list indicates that we have an urgent need for considerably more factual information than has so far been provided.

Promotion/Education

- **2004-02 # 3** : General descriptive document of the technology (see Annex B).
- Application 1 and business case.
- Application 2 and business case.
- Application 3 and business case.
  NOTE: These three applications need to be relevant to ISO standards.
- Technical details document.

Standardisation : Work Item Proposal(s)

- **2004-01 # 1** : Establish possibilities with CEN TC225.
- **2004-02 # 4 :** CEN TC225 strategy.
- SC31 WG3 strategy.
- Identify 5 National Bodies (Europe) (Globally).
- Timetable(s) CEN and JTC1 SC31.
- Informal project-based WD Revisions 1 to n.
  NOTE: Rev 1 cannot be produced because more technical data is required. Rev n is a stage when something can be offered to CEN TC225 and/or SC31. Rev 1 to n timescale depends on feedback cycle (see Technical Issues - above).
- Formal Work Item proposal (includes reference to IP).

Intellectual Property Right Issues

- **2004-02 # 5** : Establish existing and proposed patents with respect to the media or its components.
- Establish existing or potential patents with respect to the process. For example, either specifically to YAG lasers, thermal printers, or more generally.
- Identify all IP applications pending approval in Japan, USA, Europe and elsewhere. This is simply a log of the patent numbers and outline descriptions and their progress through the various approval processes.
- Develop IP policy with respect to CEN standards and ISO standards.

- Prepare a document that sets out the IP policy with respect to the formal standards bodies.

Draft Standard

Effectively, this work cannot commence until the internal Working Draft and New Project Proposal have been developed (see above). The process described below is that for a JTC1 standard, the CEN procedure could be able to deliver something quicker. Given the delay with the technical details, there may be some advantage in working the document through a CEN process and then moving it onto ISO at a reasonable stage. This is something that needs to be discussed with the entire project team once we begin to undertake some serious work.

For now, what is listed below is the SC31 process.

- New Project document submitted by Japan, together with a reasonably comprehensive Working Draft.
- Three month ballot period, with possibly additional time.
- First Work Group/Sub-Group meeting.
- Subsequent Work Group/Sub-Group meetings.
- Agreement by Work Group/Sub-Group that the document satisfies the requirements of being a Committee Draft.
- Three month ballot period, plus potential additional time.
- Committee Draft ballot resolution meeting (which needs to be called four months in advance).
- Final Committee Draft, effectively the output of the CD ballot resolution meeting.
- Four month ballot period, with possible extensions.
- Ballot resolution meeting for FCD document.
- Final Draft International Standard, effectively the output of the FCD ballot resolution meeting.
- Two month ballot period.
- Hand-over to JTC1/ISO Central Secretariat for publication.

The total ballot period accounts for 12 months, and the process cannot begin until we have a reasonable document which, in turn, requires a reasonable comprehensive and clarification of the technology.

Technology Partners

In the discussions that were held in Tokyo, we proposed that some technology partners were found in various parts of the world to help with the NP process. These partners would contribute to the project by encouraging their national bodies to be in favour of the standard, and be potential partners for rolling out the technology in Europe and in the United States. The activities are seen as:

- Identify types of partner and particular candidate organisations.
- Define a method of working with the partners (e.g. Non Disclosure Agreement, more formal relationship etc).
- Decide what to provide to partners at the introduction stage (i.e. before they make a commitment) and after they are signed up to an agreement.
- Approach candidate partners and undertake discussions.
- Identify collaborative research and projects.

## Liaison Proposal

In preparing the Work Plan (above), it is clear that there is a need for different types of liaison between Praxis Consultants and those concerned with the METI Complex Media project. The specific liaison proposals that we make are listed below. To speed up the communication process, we suggest that e-mails on a particular subject matter are sent directly between Praxis Consultants and the named liaison(s) and returned directly; with the proviso that everything is copied to the Project Co-ordinator. We feel that this will reduce the central focus of translating between English and Japanese, but at the same time all correspondence would be formally registered through the Project Co-ordinator.

So, our first proposal is to have a Project Co-ordinator who, because of the contractual arrangements between Praxis Consultants and Denso Wave, should be a nominated person within Denso Wave. At present, we are focussing all correspondence directly with Akira Shibata, but note that the contract refers to a representative, rather than a named person.

The specific areas where we feel that direct liaison will be extremely useful are as follows:

A. Technical queries and proof of concept for any issues concerned with the media and YAG laser capabilities.
B. Technical queries and proof of concept issues concerned with bar code.
C. Technical queries and proof of concept issues concerned with RFID.
D. Commercial issues associated with Intellectual Property.
E. Strategy and standardisation process through CEN TC225 and/or JTC1 SC31.
F. Promotional and educational issues, e.g. application examples.
G. Technical and editorial review of the draft standard(s) for progress through the various informal and official stages.
H. Commercial issues and decisions concerned with potential external partners.

It would certainly speed the project up considerably if e-mail exchanges could be established with one, or more, named liaison people in each of the above categories.

## Annex A : Scheduled Activities

| Activity | Description | Complete |
|---|---|---|
| 2004-01 # 1 | Establish possibilities with CEN TC225 | 2004-01 |
| 2004-02 # 2 | Establish procedure for dealing with technical queries, a few at a time. The turn-round time should ideally be 7 days. | |
| 2004-02 # 3 | General descriptive document of the technology | |
| 2004-02 # 4 | CEN TC225 strategy | |
| 2004-02 # 5 | Establish existing and proposed patents with respect to the media or its components. | |

## Annex B : Descriptive Document

The descriptive document needs to be prepared to explain some of the features and benefits of the technology. The outline headings could be:

- An overall description of the technology.
- Key applications.
- The types of business function that could make use of the technology.
- Benefits over existing systems.
- A more technical description of the process, for example using YAG lasers for the graphics and RFID for the electronic data carrier.
- A description of a typical life cycle of a container using the technology.

Some of this material already exists within the presentations made in Japan, but other material would need to be prepared. The document would be used to explain the technology to interested parties and would probably require two or three revisions during the lifetime of the project.