



IBM Response to CESR 06/025

CESR'S CONSULTATION PAPER ON POSSIBLE IMPLEMENTING MEASURES CONCERNING THE TRANSPARENCY DIRECTIVE

STORAGE OF REGULATED INFORMATION AND FILING OF REGULATED INFORMATION

March 2006

A European Listed Companies Information Database (ELCID)



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Attention: M. Fabrice Demarigny
Secretary General
Committee of European Securities Regulators
11-13 Avenue Friedland
75008 Paris

March 31st 2006

Dear M. Demarigny,

IBM is pleased to have the opportunity to respond to CESR's latest Consultation Paper on Possible Implementing Measures Concerning the Transparency Directive (CESR 06/025).

1.1 Specific Terms of Reference:

In the original mandate the Commission asked CESR to provide:

- An opinion on two preliminary issues, how agreements of interoperability of Officially Appointed Mechanisms (OAMs) could be obtained and an analysis of cost and funding implications for Member States at the initial stages of the creation of a EU-wide network;
- Secondly, CESR shall provide advice on a number of technical issues regarding the role of the Officially Appointed Mechanism for the central storage of information (Article 21(2)) for the Transparency Directive, in this regard CESR shall also provide technical advice on the role of the Competent Authority in supervising the OAM and provide an assessment of the costs of setting up an OAM that meet the standards.
- Thirdly, CESR shall provide technical advice on the filing of regulated information by electronic means with the competent authorities (Article 19(1)), and alignment of this procedure with that of the filing with the OAM.

This response from IBM addresses the three sections of the mandate and also makes some reference to the Progress Report on the first mandate delivered to the Commission on 30th March 2005 (CESR/05-150b) and the technical advice delivered on 30th June 2005 (CESR/05-408)

1.2 Context

This response by IBM is made in the broad context of the Lisbon Agenda, the prime driver for the whole FSAP process.

1.3 The Response of IBM

IBM responded in January 2005 and in August 2005 to the previous consultations on Section C, Progress Report on the Role of the Officially Appointed Mechanism (Article 17 1a) and the Setting up of a European Electronic Network of Information about Issuers (Article 18) and Electronic Filing; and the new second Mandate to CESR regarding technical advice on possible implementing measures concerning the Transparency Directive – Storage of regulated information and filing of regulated information. In those responses, IBM set out its overall vision for a Central Storage Mechanism which it codenamed ELCID – A European Listed Companies Information Database.

The ELCID architecture is a comprehensive, highly scalable and flexible approach to the issues of financial markets transparency which IBM has continued to develop as an integrated part of its overall set of offerings for financial markets participants and regulators. It is currently informing projects in

which we are engaged elsewhere which upgrade and extend existing regulated information repositories.

In its previous consultations CESR had requested views on the competing merits of a single pan-European Central Storage Mechanism versus a network of national CSMs. IBM responded that a single pan-European database directed by a pan-European governance agency would have significantly lower costs of design, implementation and operation compared with a collection of national CSMs with disparate technologies networked together. However, we recognised that such a radical approach to European collaboration would be challenging and so set out some of the technologies which could accommodate a hybrid network strategy.

In the light of the discussions held at the European Securities Committee which have shown that “the Member States prefer a network model to a centralized system for the storage of regulated information”, IBM wishes in this response to expand on those aspects of the ELCID technical architecture and governance approach which could contribute to the development, implementation and operation of such a network model.

IBM also notes CESR’s comments in this latest consultation (paragraph 250 to 254) that the variety of existing storage mechanisms indicates that “the cost of networking these mechanisms is likely to be higher than if all the OAMs were built to the same technical standards”; and that that variety may lead to multiple interoperability standards which would further raise the cost and difficulty of network operation. IBM continues to offer its ELCID architecture directly to Member States’ OAMs as such a common technical standard, but also sets out in this response technologies which may mitigate the cost of development and operation of a heterogeneous network, and enhance the performance of the “one-stop-shop” environment for users.

IBM further notes that CESR, in its comments on the alignment of filing with dissemination and with storage of regulated information (paragraph 274 to 310), seems to be coming closer to the ELCID approach, which integrated the issuers’ transparency obligations with the national regulators’ market supervision obligations and with investors’ increasingly sophisticated analytical routines and Straight Through Processing strategies. We therefore will also expand in this response on how the input standards and formats envisaged by CESR for the storage network should be integrated with the reference information needs of other market participants and regulators.

IBM has already had open and productive discussions with CESR, and we wish to continue that engagement by responding to this further consultation. We trust you find our response to be interesting, innovative and practical. We are available to discuss it with you and other industry stakeholders in order to help progress discussions and lead to a fully viable implementation.

Yours sincerely

Piet Van de Velde

Global Head Markets Infrastructure

IBM Banking and Financial Markets Industries

2. Why is IBM Responding?

There are three main reasons why IBM is responding to the CESR TOD consultation:

1. To help deliver the goals set by the Lisbon agenda, which will directly help to lower the cost of capital of all issuers.
2. To provide added value based on its experience of relevant technologies and regulatory requirements and processes.
3. IBM is not a direct market participant in the industry, nor is it a provider of market information. It is therefore offering not only a European but also a global view, recognising that European capital markets are reliant to a very large extent on global capital flows.

2.1 Credentials

IBM is a leading global technology provider with proven practical experience of delivering complex solutions in many industries including financial markets. In particular it has developed technologies capable of handling, in a single architecture, complex documents, including those which encapsulate forms of XML, together with high speed streaming data such as market ticks.

Regulators around the world, including competent authorities in European Union Member States, in the US, Japan, and other countries are increasing their oversight of the internal controls of and reporting by listed companies in producing information for their investors and potential investors. IBM has already created and delivered to such customers successful solutions, which integrate enterprise data from the widest possible array of sources into a single repository, providing compliance reports and associated audit trails for the amalgamation of such data, thereby securing long term evidential data. Markets infrastructure solutions using IBM technology distribute vast quantities of regulated data to financial market users throughout the world today, deploying complex algorithms to maintain fair markets, under service level agreements. This has given IBM first hand experience of the challenges faced by issuers in regulatory reporting compliance.

2.2 Structure of this document

IBM has submitted a comprehensive response within this document. This document begins with an executive summary. In the remainder of the response, IBM has followed the structure of CESR's Consultation Paper, organising its views in the same way, namely Introductory Comments and four specific Chapters:

- I The Officially Appointed Mechanism
- II Preliminary Issues: (I) Agreement on Interoperability and (II) Costs and Funding
- III Role of the Competent Authority
- IV The filing of regulated information by electronic means with the competent authorities

In its response to each chapter IBM has given an overview of the issue and then responded in detail to the specific questions in the CESR Consultation Paper.

3.0 Executive Summary

IBM is pleased to offer CESR its views on the implementing measures concerning the storage and filing of regulated information, taking full account of the options expressed in CESR's Progress Report and the new Mandate from the Commission, and of the opinions expressed by other market participants in their responses to earlier consultations. IBM is a strong supporter of the overall goal of the Transparency Obligations Directive (TOD) in achieving a single market in financial services and increasing capital flows. It also wishes in this response to address some relevant interactions of TOD with other Commission initiatives for European financial markets, in particular the Market in Financial Instruments Directive (MiFID) and the Market Abuse Directive (MAD), in the belief that rapid and certain access to correctly identified and easily interpreted information is crucial not only to efficient market operation but also to regulatory surveillance.

In the light of the preference shown by Member States for a network of national OAMs, IBM has reviewed CESR's latest Consultation Paper, and now offers its views on the issues raised. In many cases the change from a single Centralised Storage Mechanism to a network of national OAMs has only marginally affected IBM's views. In particular:

- The quality standards for the individual OAMs are largely those we recommended for the pan-European CSM.

The security and certainty as to the information source is best addressed by the same layered approach based on our experience of other regulators. We continue to recommend that OAMs deploy end-to-end electronic form-based approvals with digital signature technology. The process should require an initial registration phase to establish a filer's identity, and the issuance of a digital certificate to be used in the filing process. That process should include a confirmation stage, which would cover the initial format check and also ensure non-repudiation of the filing itself.

A secure repository such as an OAM needs to be managed to allow viewing access, but controlled to prevent malicious or unauthorised manipulation of the data. Commercially available products, which IBM has proven in service in OAM-like environments, effectively manage internal users as well as an increasing number of customers and partners through the Internet, addressing all four key areas of identity management:

- Identity lifecycle management (user self-care, enrollment and provisioning)
- Identity control (access and privacy control, single sign-on and auditing)
- Identity federation (sharing user authentication and attribute information between trusted Web services applications)
- Identity foundation (directory, directory integration and workflow)

- IBM continues to strongly advocate the early promotion of XBRL and X Forms as input standards and expresses some concern that CESR envisages such advanced formats as added value elements rather than as improved ways for providing "naked regulatory information" as filed by the issuer and promoting sophisticated ease of access by end users. This is covered further in the description of IBM's model for a Central Access Point.

- IBM is pleased to see that CESR is addressing the alignment of dissemination, filing and storage from the perspective of the issuer. IBM offers its assistance in developing that idea, and further points to the linkages between the regulatory reference information so collected and the "information pools" that support trading, clearing and settlement processes.

CESR has offered a number of possible models for the proposed network of OAMs. IBM has carefully considered these in the light of the objectives of the TOD and the more detailed mandates granted. It considers the Basic Access Model D to fail to address adequately the objective of "easy access" for end users. It sees merit in the other three models but is concerned that:

- None gives direct pan-European access to the content of the regulated information; rather the user is merely assisted in finding and reading or downloading complete documents. This approach constrains “easy access” by the sophisticated user. When seeking complex information from a single OAM this would bias the user towards paying for an added value service. When seeking such information across OAMs it might constrain it completely.

- The timescale for reflecting new filings through the Central Access Point seems to be unnecessarily slow – an overnight update. IBM’s experience in other markets indicates that a common requirement from many end users is for immediate alerting of a new filing on a particular instrument, issuer or sector. Overnight rather than real time updating would constrain the use of the network of regulated information repositories from competing with the dissemination mechanism and added value news services.

IBM therefore sets out in section 4.3 below a fifth model which would address these issues. It builds on Model C in having a Reference Information Database at the Central Access Point, but seeks to extend significantly the quantity of metadata held there. It also sets out a requirement that the metadata of information loaded at the national OAM should be available simultaneously at the CAP. Further the CAP should support search and complex query tools which can take advantage of extensive metadata, and can directly access the content held at the OAM. This delivers the required pan-European access which is otherwise severely constrained.

IBM recognises that such a capability at the CAP will reduce the demand for services at the individual OAM. If charging for those services is part of the business model for that OAM, then IBM confirms that technologies exist for context sensitive charging through the CAP. Given that other OAMs support free access, the CAP would need to display in advance those charging structures before the query is executed.

This model for a one-stop-shop end user access point is technically capable of operation either as a standalone CAP, or as a pan-European access facility built onto any individual OAM or Competent Authority web site. From the standpoint of governance however, IBM reiterates that the appropriate approach for the management of the integrated network and for overseeing the overall standards of the set of OAMs and the integrated network is for it to be subject to a Central Committee at CESR’s level, mandated by all the competent authorities and tasked with creating and monitoring the standards of operation of the pan-European network.

4. Detailed Responses

4.1 Introductory Concepts

4.1.0 CESR introduces this new consultation by reaffirming first the Commission's commitment to building a network of storage mechanisms functioning as repositories of all regulated information that is disseminated by issuers to act as the official source of that information. It will continue to allow "issuers to use several, different and non-harmonised means to make information available", so there is a need to provide such a central repository as a single place for end users to access all this information. The objective is to serve such end users – retail and institutional investors primarily. IBM concurs with this overall objective.

4.1.1 CESR then sets out its view that the overriding need to keep the systems easy to use and affordable implies that the "naked regulatory information" should be confined to electronic documents as prepared and disseminated by the issuer, capable of being viewed online, or downloaded for printing by the user, and that any further formatting, analysis or aggregation should be an optional value added service provided commercially by the OAM.

4.1.2 IBM concurs with the bulk of CESR's view, agreeing with the importance of a central easy access to all issuer information that is exactly as "prepared and disseminated by the issuers or by those that applied to the admission of securities to trading on a regulated market without the issuers' consent". It also agrees that translation of such documents is such a significant burden that it should not be made compulsory: that should remain a decision to be made by the issuer. Similarly it concurs that summarizing, analysis and aggregation are value added services outside the definition of regulated information.

4.1.3 However, on the issue of formatting IBM strongly believes that, in the current state of technology availability, it is not an unreasonable burden on the issuer, the OAM or the competent authority for the issuer to prepare regulatory information using open standard XBRL/XML forms. By so doing the issuer would give structure to the information presented which would allow much easier access to end user analysis or regulatory surveillance systems, while in no way impairing its ability to be read as a normal document by other users. Using the X Forms open standard with appropriate security on transmission would continue to ensure that information "as-filed" by the issuer was available in an equally certain but much more usable form for regulatory, sophisticated retail and institutional end users. Other proprietary e-Forms are also available which have equivalent capabilities or encapsulate open standard components.

In this regard, IBM broadly supports the views of the European Association for Listed Companies in its submission to CESR's last consultation "that all effort should immediately be put in developing common technical standards for the storage of regulated information and for accessing and making use of it. This means to agree on the storage format of the information, on the technical features of the storage mechanism, on the structure under which information are organized and categorized in the storage mechanism and on a specialised search engine."

IBM believes that failure to commit to the medium term use of structured regulatory filings could lead the OAM, particularly if a commercial entity, into heavy investment in compensatory value added services which would then inhibit the rapid adoption of XBRL/XML and affect the viability of the OAM's business model.

4.1.4 IBM recognises that it is premature in the current state of technology acceptance to mandate XBRL/XML forms for all regulatory information filing. However, it does consider that the Commission should use this TOD process to set a clear future direction towards structured information for regulatory filings. IBM suggests that a phased introduction should begin with a voluntary programme, then move on to those shares defined as "liquid" under MiFID, setting a "gold standard" for those issuers wishing to attract international investment. This should build on the existing work of the European early adopters, and be co-ordinated with those competent authorities in the USA and Asia that have active development efforts.

4.1.5 Use of the open X Forms standard also allows for the attachment of additional reference information (metadata) to filings by the issuer, the OAM and, if the concept is adopted, by the Central Access Point operator. Such metadata facilitates the linkage of regulatory information with other "information pools" such as market data for regulatory surveillance and investment analysis, and the

clearing and settlement processes. In particular IBM sees great value in aligning TOD with industry initiatives to create International Business Entity Identifiers.

4.1.6 IBM has already in previous responses stated that technologies exist for accommodating unstructured and structured documents in storage mechanisms. In 4.3 it discusses some of the implications of such a hybrid environment as would be created by a phased introduction of X Forms.

Q1: Do you agree that, taking into consideration the main purposes of the Directive in relation to the OAM, end users of the OAM will be investors seeking information on issuers and that the specific needs of particular investors or users should be tackled by the OAM itself and not require further and more burdensome requirements on issuers or on the OAM itself? Please provide reasons for your answer.

A1: Yes, IBM agrees that the main users of the OAM will be investors. (We explore the use that regulators themselves would make of these filings in 4.5 below) It however strongly believes that the level of their direct use of the “naked regulated information” will be impaired unless this regulated information is appropriately formatted. CESR in paragraph 23 seems to envisage such formatting being added to the filing by the OAM. IBM strongly believes that such an approach will add delay and introduce doubt as to the accuracy of the resultant “added value information”. In the context of a network of disparate OAMs, some of whom might not provide the formatting service, it would be difficult for investors to receive a consistent pan-European service if formatting were a post-submission process. IBM agrees with the comments made by the EALIC, that a natural desire to protect incumbents’ investments will slow the development of an up to date, state of the art integrated European storage facilities. As CESR recognizes, some of these facilities cannot be networked and often they provide information in static formats, strongly discounting their value and usefulness for potential users. EALIC agrees that data must be received and stored in identical or at least compatible formats with all the references needed to simplify database queries, searching procedures, time series and cross section comparison of filings, and to perform complex evaluations to support financial analysis and decision making.

Introduction of format standards and templates, in a phased manner beginning with those financial instruments defined in MiFID as “liquid”, would provide a much more functional “one-stop-shop” with lower transaction costs for investors.

IBM believes that for issuers seeking active trading of their financial instruments the benefit of adding structure to the regulated filings will outweigh the modest cost of delivery in appropriate formats. It should also be noted that many issuers, as IBM can itself confirm, are themselves end-users of such information, as for example in benchmarking their own performance against that of relevant competitors.

Q2: Do you agree that, taking into consideration the main purposes of the Directive in relation to the OAM, what needs to be stored and to be accessed in the OAM is just the regulated information, as produced and disseminated by the issuer or more than that? If so, please provide reasons for your answer and indicate what kind of facilities you would expect and indicate how to cover the costs of such value added facilities.

A2: IBM believes that the objectives of the Lisbon Agenda and the interests of Europe’s issuers and investors will be best served if TOD encourages the filing of regulated information in formats which facilitate its Straight Through Processing into automated assessment tools whether for investment analysis or regulatory surveillance. It believes that such tools will be readily available at modest cost as competent authorities around the world implement formatting standards and templates. The desire of investors for such formatted data is implicitly acknowledged by CESR’s opinion that OAMs will otherwise provide the post-submission service. IBM recognises pre-submission formatting removes a potential source of revenue for OAMs but believes that encouraging formatting as a component of “naked regulatory information” rather than of “added value services” is the better way to support the objective of the Lisbon Agenda in making Europe’s capital markets lowest cost as well as most liquid. Pre-formatting with XBRL of major submissions such as annual reports will inflate the size of the stored document a little but not so much that it imposes significant cost on the OAM. In essence the formatted document is still an electronic document and the OAM’s technology architecture should accommodate it. “Shredding” of formatted documents to extract and load the core data into analytical

tools is a cost on the user, amply compensated by the reduction in cost of alternative techniques. Similarly those agencies, in most cases Competent Authorities or Exchanges, which benefit from the STP of short documents suitable for submission through templates, will find that the costs of generating the necessary templates are outweighed by the benefits.

Q3: Do you agree with the views above or do you envisage a more ambitious approach to “easy access”? If so, please indicate what facilities you would like to see in place and detail the additional estimated costs of implementing them, how to cover those costs and explain the advantages of such an approach.

A3: IBM considers that, in the context of the current consultation, the promotion of XBRL encapsulation in major documents and of XML forms for smaller documents is a necessary step to satisfy “the final objective of offering a one-stop-shop for end users”. These formats ensure that the regulated filing carries through from the issuer or its responsible agent to the end user the “naked regulated information” with greatest ease of access, with no modification of the originator’s intentions and without delay through reprocessing by any intermediary. Other services such as summarization, analysis or aggregation are, on the other hand, value added services where the user accepts the risks of distortion and delay in exchange for an agreed additional benefit.

The Commission and CESR are rightly concerned that the costs of improving the ease of access for end users should not become an unreasonable burden upon issuers. IBM’s experience elsewhere in the world indicates that direct costs of formatting into XBRL or in completing X Forms are now negligible: the bulk of the costs lie in the related activities and disciplines necessary for responsible officers to be able to attest to the validity of the information these documents contain. IBM does however readily recognise that a change in the structure of the regulatory filing may cause changes to the existing processes and techniques used by the issuers to support that attestation, and should not be undertaken lightly and without accompanying benefits.

IBM considers that the primary benefits to the issuer of better investor access to regulated information are twofold but indirect. For X Forms it should lie in linkage to more efficient regulatory or market processes which should in turn result in lower costs or improved services. IBM believes that competent authorities are very likely to promote such process improvements, and that the network of OAMs should be designed to transfer the advantage of improved information to end users.

The use of XBRL/XML for major filings or price sensitive information offers the benefit for issuers of the greater likelihood of active investing in that issuers’ financial instruments by global investors. In IBM’s view issuers may make their own assessment of the benefit to be derived from providing the improvement to end user ease of access. Typically regulated information repository systems around the world are adopting a voluntary approach to XBRL filings, and IBM considers that the Commission and CESR should add the EU’s considerable weight to this global initiative. In the case of those five hundred shares classed under MiFID as “liquid” a further step could be undertaken of indicating a timescale in which XBRL might become mandatory for related regulatory filings. Other issuers seeking to become more attractive to international investors could then consider voluntarily adopting the “liquid share” higher standard for transparency.

With regard to translation of the language of the regulatory filing, IBM recognises the greater costs involved and the difficulty of managing the cultural resonance of literal translations. The current practice in certain Member States of allowing the option to issuers desiring greater visibility of their financial instruments of providing both local language and a translation into a language of international finance seems to be appropriate. IBM would also emphasise that formats such as XML and XBRL do provide a partial solution to the language issue by promoting harmonisation in the definition and clarity in the translation of the terms most relevant to financial analysis. Likewise the Common Reference Information described in the network models should enable a multilingual search tool to select accurately the naked regulatory filing or sections thereof for focussed translation and analysis.

Q4: Do you agree with the views above (regarding the networking of national OAMs) or do you envisage a more developed approach for the network? If so, please detail what additional

functionalities you would like to see and if possible, provide your opinion on the implications, namely in terms of costs, of setting up such a network. In considering the above, please take into account the alternative funding implications.

A4: IBM in its previous responses to CESR's calls for evidence advocated "a single central storage mechanism acting both as a "one-stop-shop" for all users – retail and institutional investors and also regulators – and additionally as a pan-European utility into which all listed companies could submit their regulated information", also expressing the view "that the most appropriate governance model for such a utility was a hybrid one, based on a "Private contractor: competent authority oversight". It continues to believe that such a single CSM offers the lowest cost solution and that the governance model offers the best method of balancing the needs of all market participants and regulators and of facilitating the introduction of new technologies. However, it recognizes the political and legal obstacles to such a radical solution and now wishes to expand on how its architectural approach – ELCID – could be used in the environment of a network of OAMs based on diverse technologies. It does this in response to Q19 in section 4.3 below

Q5: Do you see alternative technical solutions to those envisaged in this consultative document and permitting to reach the same goal, both for the designing of OAM's and for creating an EU "one stop shop"? If yes, please describe those solutions and provide estimates of costs and indications on the best way to cover them.

A5: IBM notes that CESR envisages ongoing development of the network from a simple starting point, then "being upgraded as a result of demands from users" and in order to link "with additional pools of information". IBM sets out in section 4.3 below an architecture which could support such an evolution, and in section 4.5 discusses some of the linkages to other pools of information.

4.2 The Officially Appointed Mechanism for the Central Storage of regulated Information

4.2.1: In its joint response in August 2005 to CESR's previous Call for Evidence IBM and its partner NASD, gave a detailed statement of its position on the standards to be applied to a Central Storage Mechanism (section 5.2 Quality Standards: pages 11 to 16). These in general apply equally to the national OAM. That section may be read in conjunction with the following detailed answers.

Q6: Do you agree with the above (Electronic Filing Standards)? If not, please provide reasons for your answer.

A6: IBM concurs with CESR's views on the appropriateness of electronic submission and storage, and the need to accommodate the digitisation of paper submissions as a fall back method. IBM's view on the use of structured document types to promote STP has been stated elsewhere.

Q7: Do you agree with the above (File Format standards)? Please provide reasons for your answer.

A7: IBM has stated elsewhere that technologies exist for managing diverse file formats. It has also stated its view that use of appropriate open standards allows the benefits of prescribed templates for efficient processing to be combined with easy access for both issuers and end users.

Q8: Do you agree with the above minimum standards of security?

A8: IBM concurs with CESR on the importance of ensuring that information should be stored "as-filed": in the case of erroneous filings the original and corrections should both be stored and available. Metadata should also be attached to allow users to select the filing appropriate to the end users purpose – for instance where an end user is reconstructing the environment in which a trading activity took place.

IBM further concurs on the importance of validation of regulated information filed, and confirms that such technologies are readily available whether the filing is a structured or unstructured document. Similarly IBM confirms the ready availability of technologies to ensure high availability and disaster recovery of such regulated information systems to the standards suggested.

Q9: Are there any additional standards on security CESR should consider?

A9: CESR's review of this issue is comprehensive. There will however be some time limit to the storage of information and therefore mechanisms for ultimate disposal. CESR should require the OAM to have appropriate documentation retention and disposal processes and technologies.

Q10: Do you agree that there is no need for special or additional security standards if an electronic network of national OAMs at EU level is created?

A10: Yes with regard to the storage of the regulated filings themselves. There will need to be protocols, depending on network model, for ensuring that reference information/metadata is appropriately co-ordinated between a CAP and the OAM.

Q11: Do you agree with the above (Certainty as to source, authenticity of origin, authentication)? Please provide reasons if you do not agree

A11: IBM concurs with CESR's views on these issues, though its experience of similar regulatory systems would give greater weight to the need for a "non-repudiation" function as part of best practice for an OAM rather than merely "useful".

Q12: Do you agree with the above (Time Recording)? Please provide reasons for your answer if you do not agree.

Q12: IBM concurs with CESR that information should be time stamped as it enters into the OAM but also when it is made available to end users by the OAM. The importance of this time stamping for end users and regulators will however vary depending on the precise alignment of filing with the OAM and dissemination. This is discussed in section 4.5 below.

As a general comment IBM believes that it is best practice for the OAM to make available to originators of filings tools against which the originator may pre-check the submission. This would at least control the occasions where filings are rejected for simple format errors. With more advanced E-forms technology additional content pre-checking is a considerable added benefit.

Q13: Are there any additional standards on time recording CESR should consider?

A13: Since one likely use of the repository is to enable users to reconstruct a trading scenario in a market abuse investigation, it is important that the time of the public availability of the regulated information is known with fine granularity. This is discussed further in 4.5 on the alignment of dissemination and filing.

Q14: Do you agree with the above (Easy Access)? Please provide reasons for your answer.

A14: IBM concurs that OAMs should clearly distinguish between regulated information "as-filed" by the originator, and information modified by the OAM itself. It comments elsewhere on the feasibility and desirability of that original information's having structures to facilitate advanced end user access.

Q15: Would you require searching capabilities in the language of international finance to be able to have "easy access" to the information stored?

A15: IBM concurs with CESR's view that in the context of a network of OAMs where full multilingual search capability is provided at the pan-European level, it is impractical for the national OAM to provide search capability in languages other than the national languages and the language customary in the field of international finance. This does restrict access to value added services though not to naked regulatory information. However, if access is given via the multilingual CAP to complex querying on the naked regulatory data, especially where that is structured or encapsulates XBRL/XML, then currently available search technology would allow users to construct their own added value information. We discuss the technical challenges and funding implications in section 4.3 below.

Q16: Do you agree with the above standards in relation to technical accessibility? Please provide reasons for your answer if you do not agree.

A16: *Interoperability:* IBM concurs with the CESR's emphasis on the need for full agreement between OAMs and, if such be the model, with the CAP, and for strict adherence in future operation. The degree of interoperability and the level of co-operation are discussed in more detail in section 4.3
Availability for Issuers: IBM concurs that access for issuers to the OAM should be continuous, and that technologies supporting 24 X 365 availability do exist.

Time between receipt and publication of regulated information: IBM is a strong believer in the principle that fast markets are the least open to abuse. It accepts that some competent authorities or OAMs might require some delay between receipt and publication of regulated information. However, it believes that such delay must be equal for direct users of the OAM and for indirect users through other OAMs or a CAP.

Type of technology used at the interface with end users: IBM fully concurs with CESR's view that the internet is the appropriate interface for pan-European user access.

Operational Hours: IBM concurs that 24X365 availability is the appropriate standard for OAM availability.

Service Support: IBM concurs that a user support service should be an obligation on the OAM to achieve easy access. It also agrees that the cost burden of such a service may preclude 24X365 service, and that this should be left to the discretion of the OAM. Consideration could also be given to pooling of out-of-hours service through a CAP if such should be the model chosen. IBM explores the role of the CAP's offering to end users in 4.3 below.

Q17: Do you agree with the above in relation to the format of information to be accessed by end users? Please provide reasons for your answer.

A17: Format: IBM agrees that as a minimum the naked regulatory information stored on the OAM should be able to be read, downloaded and printed "as-filed" by the issuer. It elsewhere strongly recommends that the Commission encourage the filing of information in more structured formats, which while allowing access through a "document paradigm" also offer automated standards-driven advanced query. Conversion to the minimum document standard should not remove this additional issuer information.

Organisation and categorisation of regulated information: IBM concurs with CESR's view that the provision of sufficient reference information is a critical element for "easy access", particularly for the consistency of pan-European searches. IBM believes that the establishment and ongoing development of such reference information will be a major activity for the body which governs the network. It sees a major opportunity for the reference information held in this network to be interlinked with other information pools especially those which provide reference data to financial markets' trading and supervision, and to those which support the interaction of trading with clearing and settlement. There are a number of related initiatives by bodies such as ISITC which could be co-ordinated with the reference information developed for the TOD.

Printed Versions: IBM concurs with CESR that there is no reasonable need for the OAM to provide printed copies of any regulated information in addition to the electronic one which can be downloaded and printed.

Q18: Do you agree with the above (Costs and Funding)? Please provide reasons if you do not agree.

A18: IBM notes that the provision of free access to recent filings is already the practice in a number Member States and with a number of overseas authorities notably EDGAR. Notwithstanding, IBM can confirm that the technology exists to allow context-sensitive charging. Metadata identifying those information elements for which charging applies should be easily displayed to the end user.

IBM has in previous responses expressed the view that single pan-European solutions with clear governance would be significantly less costly than multiple national solutions on different platforms with further variations in requirements. Nevertheless, IBM confirms that readily available information integration and advanced query tools for heterogeneous environments will mitigate the impact of such organisational complexity. It stands ready to assist CESR and its Transparency Expert Group in the evaluation of costs of the favoured network models.

4.3 Preliminary Issues: (I) Agreement on Interoperability and (II) Costs and Funding

Q19: What are your views in relation to the issues being discussed above?

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4.3.0 General Comments:

An important stated objective of the Transparency Directive is the creation of a one-stop-shop for end users. As CESR states: “This means that an investor should be able to access all regulated information generated by all issuers admitted trading on all regulated markets throughout Europe (pan-European regulated information), from one place.” In IBM’s experience of global financial markets participants – both investors and regulators - their use of information is increasingly characterised by:

Desire for close to real time information

Ability to perform complex aggregation and analysis, integrating regulated and other market information, using their own insight into appropriate techniques and technologies.

Desire for automation

To respond to these users the model for a pan-European network will need to provide at one place close to real time regulatory information, sufficient reference information (metadata) to allow powerful querying and also to interlink with other pools of relevant information, and flexible query tools.

IBM’s model (see diagram in 4.3.2 below) for the network would therefore extend Models A and C

The CAP database in Model C would be enhanced to acquire more extensive metadata from the OAM as the content (regulatory filing itself) is loaded into the OAM’s system.

This would allow the end user for instance to set a watcher on the CAP to send an alert, which could execute the request on the OAM for document transmission, when a new filing is posted for an instrument which the user wishes to monitor.

The ability to view the reference data will allow end users to assess which issuers and documents they wish to include in their analysis. An end user would be able for instance to select only those documents which encapsulate XBRL or are translated. This would help eliminate ineffective queries. A key additional point is that, should OAM-sensitive charging be part of the design, then users would be aware of charging at an early stage.

We note in this context that CESR had not proposed to make the Reference Information available to end users

The metadata revealed to end users could include not only that of the naked regulatory filing but also of added value services and information provided by the underlying OAM. In the context of the multilingual query tool described below, this might create additional revenue for commercial OAMs.

The metadata of the CAP database would be further enhanced with metadata from other relevant pools of information.

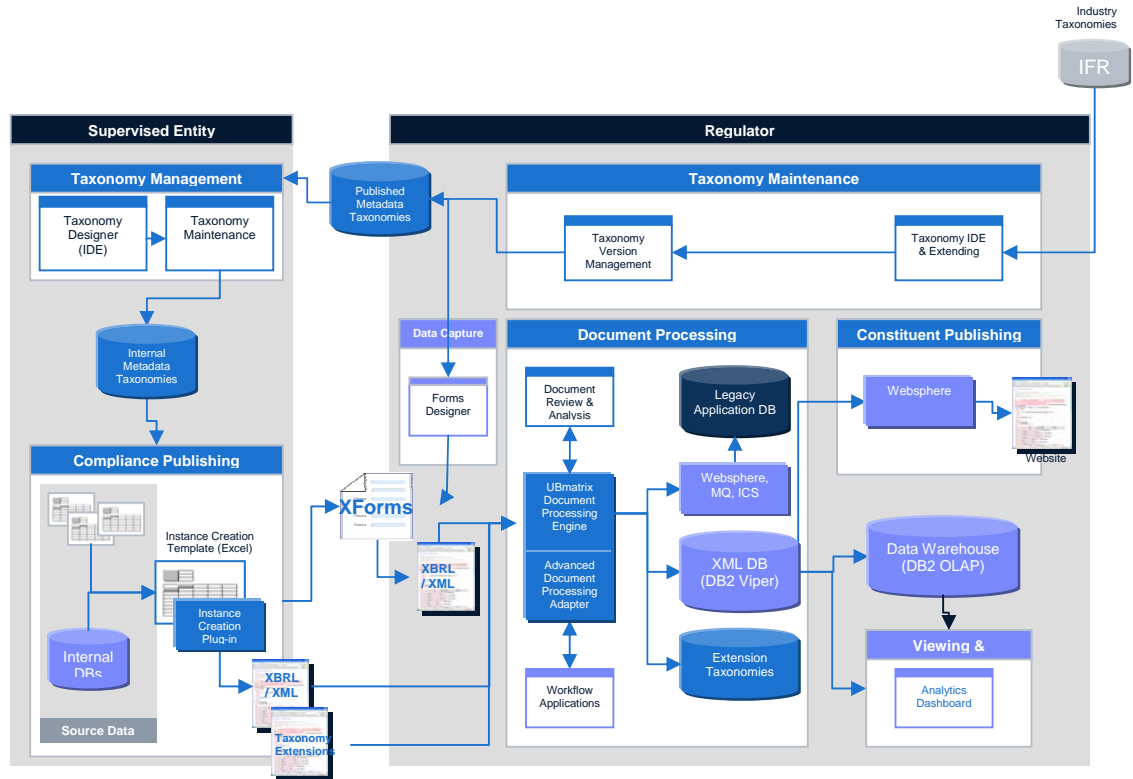
The CAP would have a query tool that allowed users to mine the actual content of the OAMs database, rather than just view or extract documents.

Such tools allow text mining of most common formats of document, and also enable the utilisation in user algorithms of structured data elements in XBRL or XML filings.

With XBRL and XML, the taxonomies are a major element of the overall metadata, but are open and inherent in the submitted filing. The diagram

below illustrates how such XBRL/XML filings would be initially created and loaded.

Multilingual querying combined with the common structures of IFRS-linked XBRL/XML taxonomies is likely to mitigate significantly the problem of multilingual access. Much information relevant to end users may be acquired from filings encapsulating XBRL without burdening the issuer with full document translation.



4.3.1 Governance Issues:

IBM broadly concurs with CESR's preferred approach, namely a binding provision by which:

“a. Member States shall be required to ensure that OAMs to be appointed abide by an interoperability agreement

b. A model of network is defined, as it is necessary to understand what needs to be interlinked and to understand which interoperability requirements are necessary

c. Some sort of coordination needs to be in place to ensure that the interoperability agreement is abided by the OAMs.”

With regard to the issue of co-ordination, IBM emphasises the point CESR makes in paragraph 135 that the network will need to be flexible in order to cope with technological change at the underlying OAMs and indeed with end users and the other “pools of information” in financial markets. Only the least ambitious model for the network would be able to develop without close, continuous coordination. IBM envisages a standing central committee of competent authorities tasked with creating and monitoring the standards of operation of the network.

IBM agrees with CESR on the need to link to other relevant pools of financial markets information. It therefore suggests that CESR also co-opt onto the central committee suitably qualified and empowered representatives who can facilitate those linkages.

4.3.2 Technical Issues:

The diagram below illustrates IBM’s envisaged model for a network of OAMs. The concepts and technologies could be utilised by a single OAM, with the CAP acting as gateway to pan-European regulatory information, perhaps linking only to locally relevant “other information pools”. However, we endorse CESR’s statement that the costs and management complexity of multiple national CAPs each accessing the rest of Europe’s OAMs are likely to be significant.

The technologies to enable the development of a cost effective model such as this already exist. Key elements are:

Information Integration:

These technologies have adapters enabling access between the central metadata repository and the disparate repositories of the underlying databases. They further have query adapters which allow end users to choose their own query tools. Typically these adapters are pre-built for the vast majority of common databases and query tools.

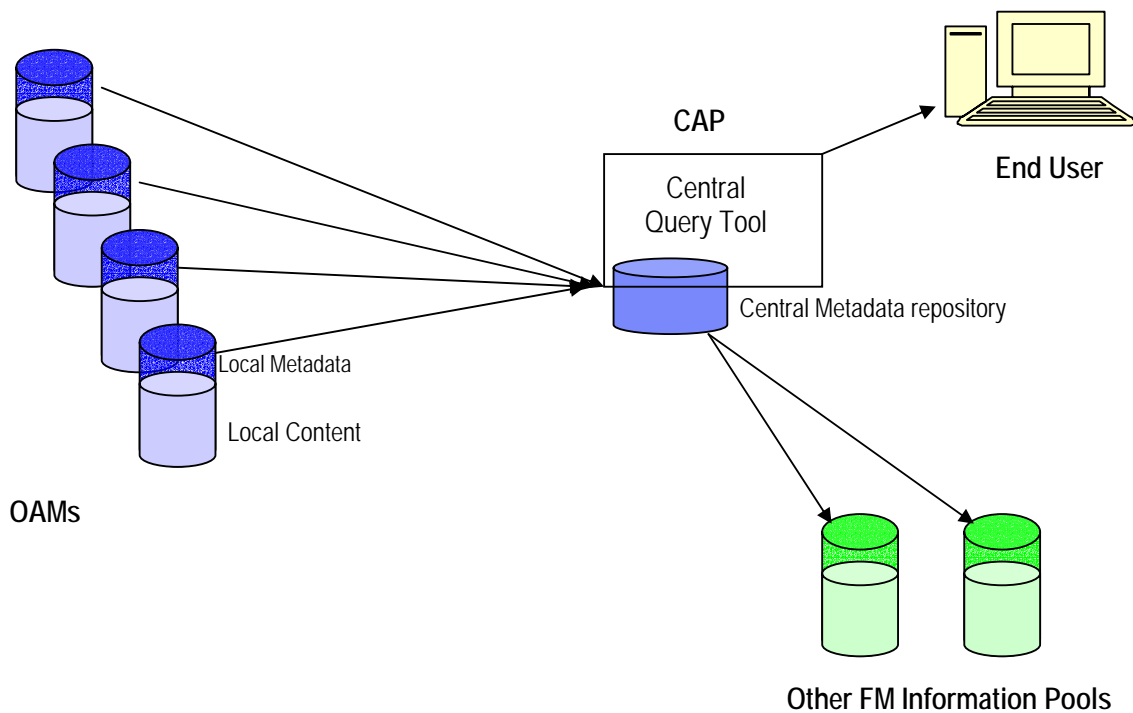
Information Integration technologies allow the central metadata repository to be loaded with metadata, or to search the underlying databases and to discover autonomically their metadata. Such autonomic capability will assist the governance agency in monitoring OAMs and discovering needs to update common reference information.

Query tools:

Recognising that the OAM repositories will contain disparate types of content – documents in a variety of formats, some with encapsulated XBRL/XML, and potentially data collected through templates or ftp, the query tools IBM would propose for the CAP would be able to execute queries using SQL, X Query and text search.

End User Access

We of course endorse CESR’s view that internet access is the prime end user interface with the CAP



4.3.3 Costs and Funding

IBM agrees with CESR that a detailed analysis of costs is at present difficult since the model of the network is as yet undefined. It also agrees that multiple interoperability standards are likely to significantly increase the overall cost of the network. It therefore agrees that the detailed analysis of costs is better deferred to a separate paper and a response to an RFP.

IBM above has proposed that the CAP should be able to perform complex queries on the actual data of the underlying OAM. Having that type of complex query available at the OAM level has the benefit that such queries may be launched using a user interface in the language of the end user, a facility that is costly and therefore best shared rather than multiplied across OAMs. Such query tools may also be linked to charging tools which would allow a use-based charging structure, sensitive to the custom of the Member State where the OAM is based.

4.4 Role of the competent authority

Q20: Do you agree with the above approach (Role of CAs)? Please provide reasons for your answer if you do not agree.

IBM agrees with CESR's views. The successful implementation of a system as envisioned by CESR will require the involvement of the Competent Authorities, to varying degrees, in a number of areas. Firstly, the appointment and recognition of OAM's will require an objective review of OAM applicants, as well as the review and inspection of existing OAM's, to ensure that they comply with the minimum standards that are set for them (discussed above). Put differently, someone needs to have the responsibility to officially appoint Officially Appointed Mechanisms. This function is properly a function of the Competent Authorities, particularly in the absence of any self-regulatory organisation to fulfil this role.

Implied in this authority is the power to direct OAM's to modify their systems to bring them into compliance, and to suspend or revoke recognition as an OAM where necessary.

In addition to technical compliance, Competent Authorities should exercise oversight with respect to fair access and non-discriminatory pricing by OAM's. Access to information is of fundamental importance to the markets, and indeed the ability of the market to function effectively and fairly rests to a large degree on full and fair access to this information. While the *enforcement* of discriminatory practices may more properly lie with competition authorities, the *surveillance* of access lies best with the Competent Authorities who would hold the power to revoke or suspend official recognition.

Q21: Do you agree with the above approach (Role of CAs when OAM shared)? Please provide reasons for your answer if you do not agree.

A21: The adoption of joint OAM's by two or more Competent Authorities would help to improve the efficiency of the system and should be encouraged. Where this occurs, specific arrangements between the Competent Authorities will be necessary in order to ensure that sufficient oversight is conducted with respects to all aspects of the system. Such bilateral arrangements are best left to the Competent Authorities involved. This may in fact involve separate, bi-lateral Central Storage Mechanism Committees for the administration of the joint mechanisms, within the framework of a pan-European Committee as discussed elsewhere in this document.

Q22: Do you consider that a competent authority can, within the limits set out above, change the standards over time in case new technological evolution occurs?

A22: This raises a larger 'stakeholder' issue. Even if there were no joint OAM's, and each Member State were to have its own OAM, other Member States would have an interest in the oversight of that OAM since information from the OAM will be accessed from across the EU. With mutual recognition of OAM's, reliance would be placed upon other Competent Authorities to exercise sufficient oversight and enforcement of the common standards. It is inevitable, however, that disputes would arise with respect to standards, access, and compliance, and we believe that these should be resolved in the first instance by a Central Access Point Committee – see A23 below

Q23: Do you agree with the above approach (Regulation and Coordination of the European network)? Please provide reasons for your answer if you do not agree

A23: IBM concurs that the regulation of the network is best undertaken at a pan-European level. Whatever model of network is chosen there will be the need for monitoring and control, for resolution of disputes and allocation of fault, and also for the ongoing choice of input standards and templates. IBM believes that the appropriate approach is for the network to be subject to a Central Access Point Committee mandated by all the competent authorities and tasked with creating and monitoring the standards of operation of the pan-European network. An operating board, accessing appropriate technical resources from the OAMs, would be responsible to the participating OAMs and Competent Authorities.

Such types of governance are successfully operating around the world – e.g. the ABA Committee on Uniform Security Identification Procedures (CUSIP), and the Continuous Linked Settlement (CLS) Bank to which IBM made reference in its previous submission.

4.5 The filing of regulated information by electronic means with the competent authorities

4.5.0 IBM has consistently articulated the concept of an integrated approach to the dissemination, filing and storage of regulated information. It therefore sees CESR's interest in alignment of the filing with the storage systems as a valuable step forward. It particularly endorses CESR's view that such an alignment facilitates issuers in fulfilling their obligation under the directive.

IBM also considers that aligning the dissemination, filing and storage systems will have two further benefits. It will ensure that timing of disclosure of regulated information is rigorously controlled and clearly even-handed across all users. It will also facilitate the attachment of reference data which can in turn be used to create efficient linkages with other pools of financial market data, which is likely to lead over time to significant efficiencies in financial markets processes.

Q24: Do you agree with the above interpretation of the purpose of filing and the conclusions made on basis of the interpretation? Please provide reasons for your answer

A24: We set out that the role of the OAM in validating the filing should be confined to that of ensuring that the format supplied adhered to the required standards, and to then faithfully transmitting and storing that filing while positively notifying the filer of the stage of progress through the procedure. This would allow the OAM to focus on the efficiency and timeliness of the process of providing market transparency. The issue of the quality of the substance of the submission is however, as CESR correctly remarks, the responsibility of the Competent Authority. Before committing the submission as a final record further examination may prove appropriate. If this is the case then the initial submission should still be recorded to show what the market's knowledge was at the initial point. It may well be that timeliness is less important than thoroughness in those authorities processes; though the principle of simultaneity of disclosure to the market, in this case of regulatory action, must be adhered to.

The technologies for ensuring authenticity of origin and integrity of content whether for OAM or Competent Authority are identical. Similarly the advantages to competent authorities in automating the surveillance processes require that filers of listed company information should be required to use input standards and templates with electronic submissions.

Q25: Do you agree with the above conclusion (no necessary identity in filing with CA and with OAM)? Please provide reasons for your answer.

A25: IBM accepts the distinction in law that CESR makes. However, IBM believes that the objective of making Europe's financial markets efficient, low cost, certain and transparent at least cost to issuers will be best served by completely aligning the initial process such that the OAM is acting as the receiver and repository of the initial submission on behalf of the Competent Authority. Subsequent regulatory actions could continue to use the OAM as the supporting database, given appropriate access controls and security. However, we believe that a replication of necessary information from the OAM to the Competent Authority's internal database is the more appropriate approach.

It may be argued that use of an external agency such as an OAM would create the danger of loss of record of submissions in the event of catastrophic failure of the utility or legal entity. A sufficiently large organization would be able to afford at reasonable unit cost to build in disaster recovery processes, but this would place a burden on smaller member states. This argues for utility sharing between member states as we mention above. An alternative approach would be to build the network with a central hub that could act as the pan-European repository of record, or as a central disaster recovery mechanism.

Q26: Do you agree with the above approach (electronic filing)? Please provide reasons for your answer.

A25: IBM concurs with CESR on the great overall benefit to issuers and regulators of electronic filing. The proviso in paragraph 284 that individual shareholders "may not have the necessary means of communication available" may currently be true, but is surely becoming an anachronism. The suggestion in paragraph 289 of alternative mechanisms for a period of time is acceptable.

We note the account given to variation in filing between Member States. We believe that where feasible and relevant such differences should be tabulated and added to the overall metadata of the network to ensure full transparency.

Q27: Do you agree with the above (Standards of security and certainty)?

Q28: Is there a need for an additional level of detail? Please provide reasons for your answer.

A27 and 28: IBM concurs with CESR's opinion. It refers back to the distinction made in paragraph 278 between initial filing and determination of the adequacy of the content, and its opinion that

inadequacy of the content should lead to a corrective re-filing and that both events and documents should be available with relevant time stamps to end users. In this context IBM would also point to the tools that become available for automated content checking once fully structured formatting such as XBRL is applied; and the opportunity to deploy those content checking tools for pre-submission checking by originators.

Q29: Do you agree with the above (time-recording) or do you envisage particular issues that need to be dealt in relation to the validation procedure and the time stamping of regulated information? Please provide reasons for your answer.

A29: IBM broadly concurs with CESR's comments that technical validation as opposed to content checking should be a highly automated instantaneous process, and should be irrelevant to time stamping. However, where non-repudiation processes are used, then an opportunity exists for delay between technical validation and acceptance by the originator, that may be prolonged. Validation should be seen to be complete when that handshake has concluded.

Q30: Do you consider that CESR should require specific forms to be used to file regulated information with the competent authority? Please provide reasons for your answer.

Q31: Do you consider that CESR should require specific input standards to be used to file regulated information with competent authorities? Please provide reasons for your answer.

A30 and 31: As CESR notes there are many cost benefits to all participants in structured filing. Experience shows that electronic filing is in itself a net cost reduction for filers. In the case of templates such as X Forms the small added cost of complying with the constraints of the form are more than counter balanced by the benefits of certainty of compliance with the relevant regulation.

The cost of preparing major regulatory filings to XBRL standards is being shown to be significant in the first year as corporate data structures are aligned with regulatory data dictionaries. The major work having been done in that first year, subsequent filings have proven easier and the additional benefits of certainty in attestation and compliance have been valuable.

IBM accepts that there is no current level 2 requirement to use specific forms. However, given the benefits to all parties it feels that CESR should seek a mandate from the Commission to use any collaborative committee set up to manage the proposed network to promote the use and harmonization of such forms.

Q32: Do you agree with the above concepts of "alignment"?

Q33: Are there additional ways of alignment CESR should consider?

Q34 – Do you consider that CESR needs to expand this idea to properly address the mandate?

A32, 33 and 34: IBM strongly believes that the preparation, formatting, filing, dissemination and storage of regulated information should be approached holistically. In this and earlier responses to the TOD consultations it has demonstrated its commitment to providing the technologies to support such an approach. CESR's insight that the alignment of the three obligations (dissemination, filing, and sending to OAM) should be seen from the perspective of the issuers is very valid. IBM would also point to the further alignment of this process with the prior assembly of corporate information and attestation on filing. IBM offers its full collaboration in assisting CESR in expanding these ideas.

5. Concluding Remarks

IBM continues to support the overall goals of the TOD and other initiatives in achieving a single European market in financial services and increasing its capital flows. It believes that the Financial Services Action Plan is an historic opportunity for a radical reappraisal and reconstruction of the infrastructure of European financial markets. In its response to the TOD consultations it has always attempted to promote solutions which while practical also represent the most progressive in its experience of global financial markets thinking. Along with other respondents to CESR's last consultation, IBM believes that there is a danger that the natural desire to protect existing investments may be inhibiting the development of a new transparency framework suitable for the needs of rapidly evolving financial markets. In particular

IBM strongly supports CESR's new desire to align fully the dissemination, filing and storage processes and mechanisms

IBM urges CESR to take a more active role in promoting XBRL and XML formats given the advantages for the entire industry as outlined herein before

IBM strongly supports the integration of regulatory information with other pools of financial markets information.

Having responded to all of CESR's earlier consultations around the Transparency Obligations Directive, IBM will be pleased to respond to any future requests for proposal in this area from either national OAMs or from a new central co-ordinating body set up under CESR's auspices.