

**Health Professions Council
Finance & Resources Committee 22nd March 2006**

HPC Information Technology Overview 2006-2011

Executive Summary and Recommendations

Introduction

Each year the IT department update the rolling 5 year IT strategy. This document is detailed and large.

This report gives an overview of the direction HPC's use of IT is taking.

Decision

The Committee is requested to note the document. No decision is required.

Background information

None

Resource implications

No immediate impacts

Financial implications

None based on this document. Any major investments will be forwarded with a business case to the Finance & Resources committee for approval.

Background papers

INFORMATION TECHNOLOGY STRATEGY AT THE HEALTH PROFESSIONS COUNCIL 2006- 2011 (document dated 20060120gITDSTRAT) approx 100 pages.

Appendices

Date of paper

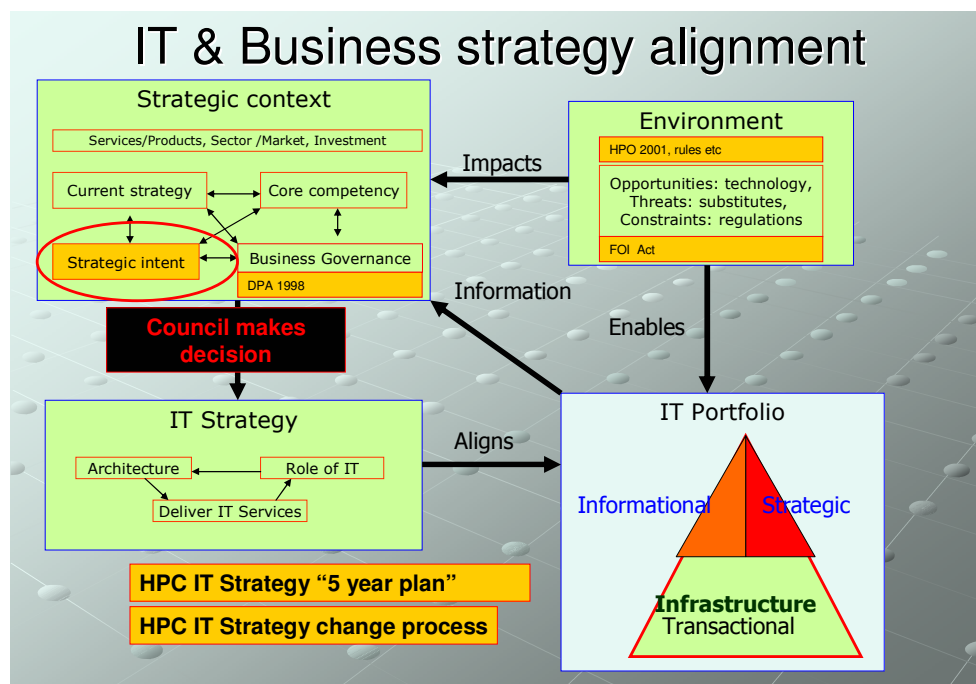
10th March 2006

HPC Information Technology Overview 2006-2011

1. Business Aims of the IT function

- The HPC IT function will base its activities around the “Center for Information Systems Research” IT management model as promoted by MIT in the US.
- Support the business processes of HPC including the core functions of maintain and publish a register, approve and monitor education provision, provide a Fitness to Practice process, and Communicate with stakeholders
- Share common information throughout the organisation where ever possible (CRM principles)
- Map and streamline workflows continuously
- Maintain scalability in internal and external customers provision
- Provide value for money
- Allow HPC to be as open and transparent as possible
- Maintain appropriate security measures throughout the organisation

The relationship between Council decisions, IT Strategy and the functions and applications the IT department support is illustrated here.



2. IT Infrastructure

IT Infrastructure covers the range of

PC and Server estate; network cabling and wireless based systems and telephones including ACD. Videoconferencing will be evaluated again as this technology may be useful for remote offices, or discussions with stakeholders.

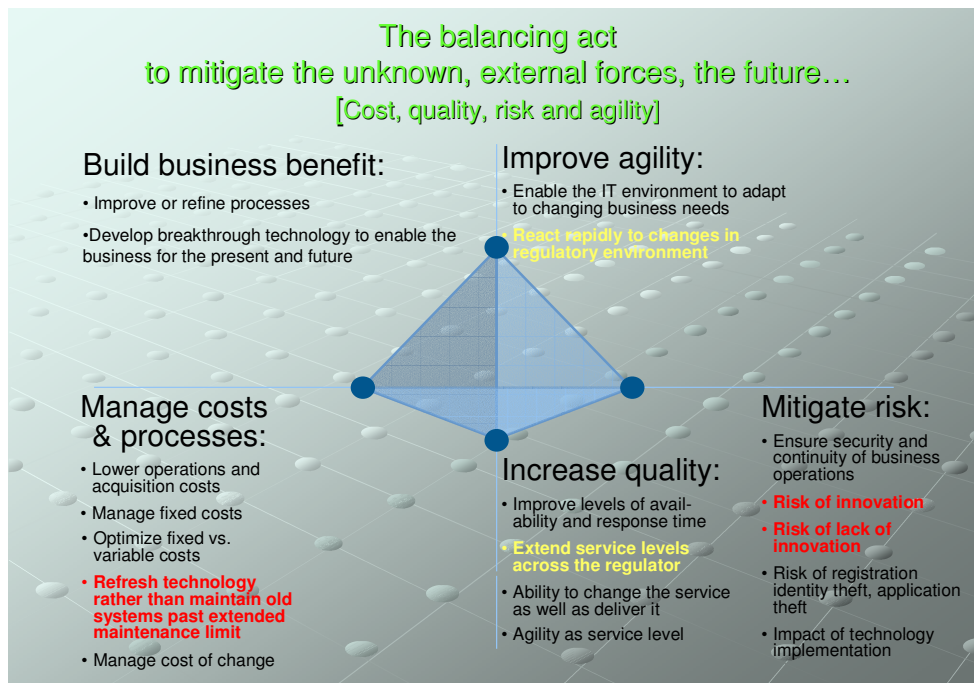
Software applications and tools, including Microsoft Office applications and base level software such as operating systems and database or middleware products
 Virus and security applications

Employees, training and processes to maintain those functions

Where software versions migrate beyond the currently used version at HPC, we will evaluate the risks of not migrating to the latest version, or migrating to the current penultimate version. If sufficient business benefit is gained by migration we will migrate to the latest version after an appropriate period of usage in industry. Where vendor support for a product is not guaranteed, we will evaluate in light of current stability vs. risks of new versions and any intrinsic issues we may face with that new version.

Software audit will be carried out periodically by an external contractor to ensure HPC maintains an adequate number of software licences, thus fulfilling our legal obligations for software licensing.

Hardware assets will be tracked using a Lotus notes development. Decisions concerning IT infrastructure are made in light of the parameters indicated in the diagram below.



IT Project Initiation

This process is illustrated in the flow diagram toward the end of this document. This illustrates the process to start IT projects at HPC, based on the CISR model.

3. Web and internet security

A managed service provides the greatest security for small to medium sized organisations unable to finance highly trained IT security specialists.

This provides a managed firewall, a web content filtering service, an anti-virus service for inbound and outbound e-mail, and integrated VPN security for those employees working offsite.

This will continue to be the preferred solution for HPC.

(a) Penetration testing

The HPC network is indirectly linked to the internet, behind a series of robust security appliances and policies. As our internet site provides the only route to examine the HPC register, therefore it must be intrinsically secure at all times.

To prove that the on-line register does not form a route to misappropriate information an annual penetration test will be carried out by an external contractor, of known ability and trustworthiness.

This will be supplemented by further quarterly specific tests to prove that PCI credit card standards are adhered to even if our organisation is currently just below the threshold where these tests become mandatory.

(b) Records Management, Content Management, Knowledge Management

Document level control and file naming is supported by an internally developed tool that operates on Microsoft Word, Excel and PowerPoint applications. Document level file naming is of the form YYYYMMDD,version, document type, department or committee, document title. Further data can be retained within the file name including confidentiality and destruction profile.

A standard set of directories have been provided for all departments. All completed company material should be stored on the G: drives to ensure long term storage and recoverability post employee departure.

The IT department have the ability to search across all directories to locate documents.

An ongoing archive project will examine the physical paper records, to ensure only relevant documentation is stored long term.

As content management, records and knowledge management vendors merge over the next few years, the IT department will evaluate options to provide an across the organisation solution. Currently such a solution is high risk and highly expensive.

An interim solution will be evaluated, based on Lotus Notes.

Monthly back up tapes from the IT infrastructure will be stored off site by a vendor organisation.

(c) Provision of e-mail services, web chat technologies

All web chat sessions are recorded to back up and this service is currently only provided to those departments where managers have opted in to usage.

At some time in the future we will evaluate the benefit of archiving all e-mail traffic to a write once, read many (WORM) storage device. There is currently no legislative requirement to do this, but it is becoming accepted practice in commercial organisations.

(d) Disaster Recovery & Business Continuity

HPC backup all key data overnight to server directories that are then backed up to corporate scale tape solutions. Month end tapes are stored off site in an underground bunker. Daily tapes sets are taken off site by IT staff.

Data from the LISA registrations system is also specifically replicated overnight to servers off site in a secured server farm maintained by our ISP. Lotus Notes data, and therefore the systems therein are replicated every 15 minutes to the same server estate.

The timing of the LISA backup must be managed to allow backup to be completed before any batch processes are run, creating an easier fall back position, than if the processes were either part complete or fully complete.

In 2006 -07 HPC will back up all data overnight to the ISP server farm, and avoid the requirement to take HPC tapes off site every night.

These data can be accessed by VPN solutions from either HPC laptops with 3G cards, or more usually a PC environment set up in our back up office location at NDR in Uxbridge.

Annual tests of the DR/BC solution will take place.
This will include loading of the latest information from the LISA production application and registration system

4. HPC Specific Business Applications

HPC IT is providing two types of business application, those where the process is closely defined by legislation (Health Professions Order 2001); and those where the outcomes are predictable, but the day to day operation are less well defined.

Where the exact business requirements are less well defined, HPC will develop in house process specific applications on a robust platform such as Lotus Notes / Domino, where requirements can be refined over time, and modifications made relatively cheaply. An internal Notes resource will be required in house to maintain and develop these systems. Some specific Notes applications may be required to be built by contractors to our specification where time pressure does not allow them to be built in house.

Major developments will be carried out by external contracting organisations, under the close guidance of the user departments and the IT function.

(a) Registration and Application

The existing LISA registrations system has been in place since July 2003, and provides the workflow and publication of data pertaining to the register of those HPC professions able to work in the UK.

Additional functionality has been added on an almost continuous basis as processes such as Return to Practice, Continuing Professional Development and Ethnicity / Diversity have been rolled out.

Each time such additional functionality is added there is a slight degradation in the overall performance as the code becomes more complex. At some stage in the future a major upgrade of hardware, software, or application may be required to maintain suitably rapid function. This will be monitored on an ongoing basis. Typically no major production system lasts more than 5 years without a major rewrite. HPC IT will monitor what systems other regulators are using or developing.

All functionality that can be provided to registrants, applicants, education providers and employers will be developed over the medium to long term to ensure data input at HPC is kept to a minimum. This will usually be via the provision of on-line services. Address change, registration renewal, modification or up date of payment details, application data entry and submission of graduate pass-lists from HPC approved courses will be supported with appropriate levels of authentication and validation.

(b) Fitness to Practise

The Fitness to Practice function at HPC will be supported by a bespoke Notes development, with data migrated from the existing Access databases. Workflow and calendaring will be provided

Data from the existing Access solutions will be imported to support historic reporting.

(c) Approvals & Annual Monitoring

A Lotus Notes based application will be developed using the existing FTP system functionality as a basis. This will constrain development costs and allow the commonality to be supported more cost effectively long term.

(d) Freedom of Information & Data Protection Act Subject access Requests

A bespoke development in Lotus Notes already provides the workflow and calendaring for Freedom of Information requests. This system will be duplicated and modified to manage Subject Access Requests under the Data Protection Act 1998.

(e) Scalability of HPC functions

Technology Business Direction

As a modern regulator and a modern business HPC uses technology to provide control of workflow, resilience,

To help the long term development of the business functions of HPC we must increasingly use on-line internet based, or possible mobile telephony based systems to allow direct input of applicant and registrant data into the core back end systems, with appropriate validation in place.

Where ever paper forms are currently used, or would be used in future, an on-line version should be provided also, allowing the “customers” direct input to be captured to the production or intermediate systems.

This will save data input resource within HPC, and allow faster turn around times at times of heavy workload.

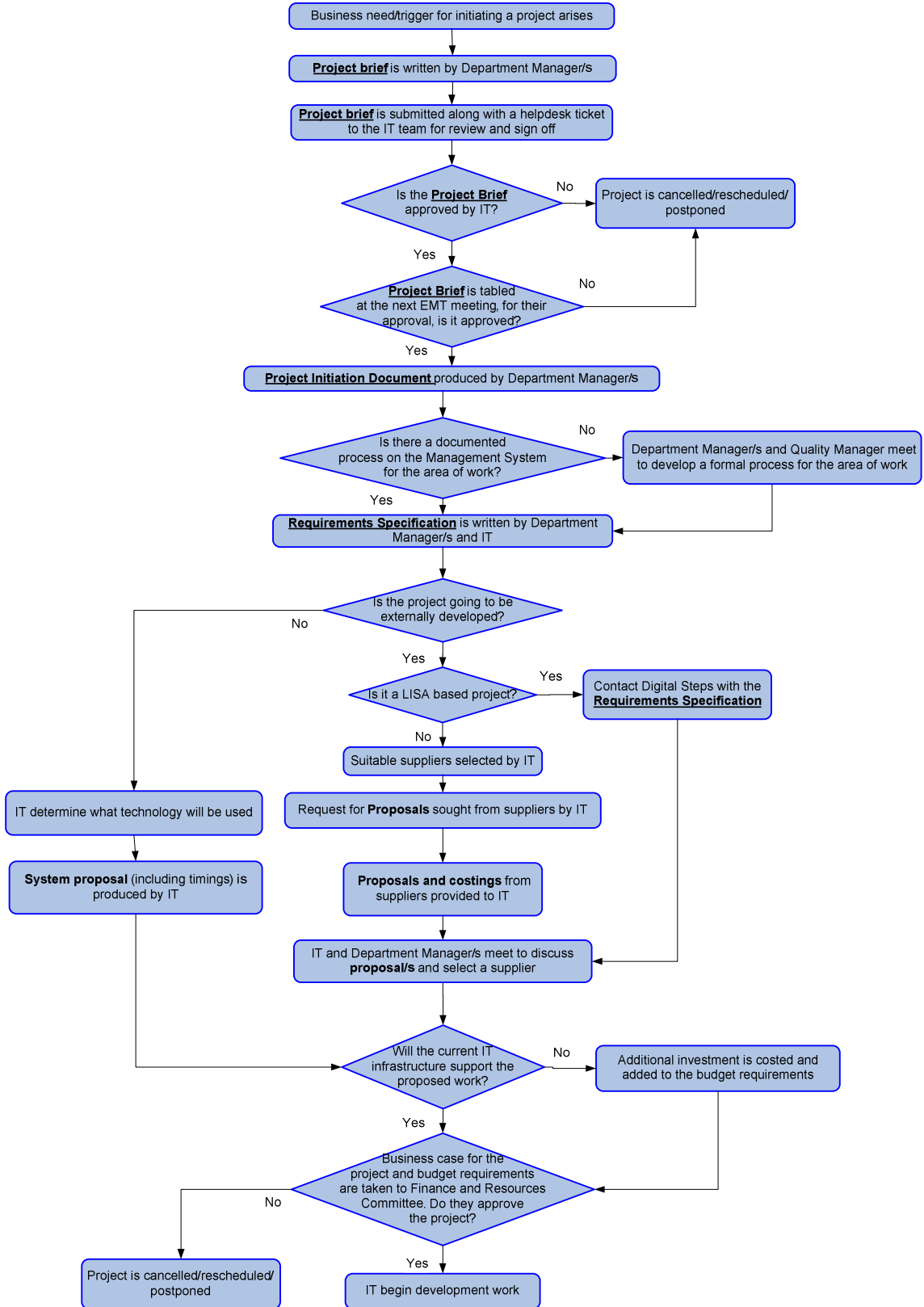
Thus HPC will encourage the take up of on-line applications, on-line renewals and the use of the HPC Authentication model.

Where HPC uses xml to populate systems, and where suppliers or stakeholders find it difficult to supply data in the required format, the IT department will determine if it is cost effective to offer a data translation service from MS Excel spreadsheets or other easy to use data sources.

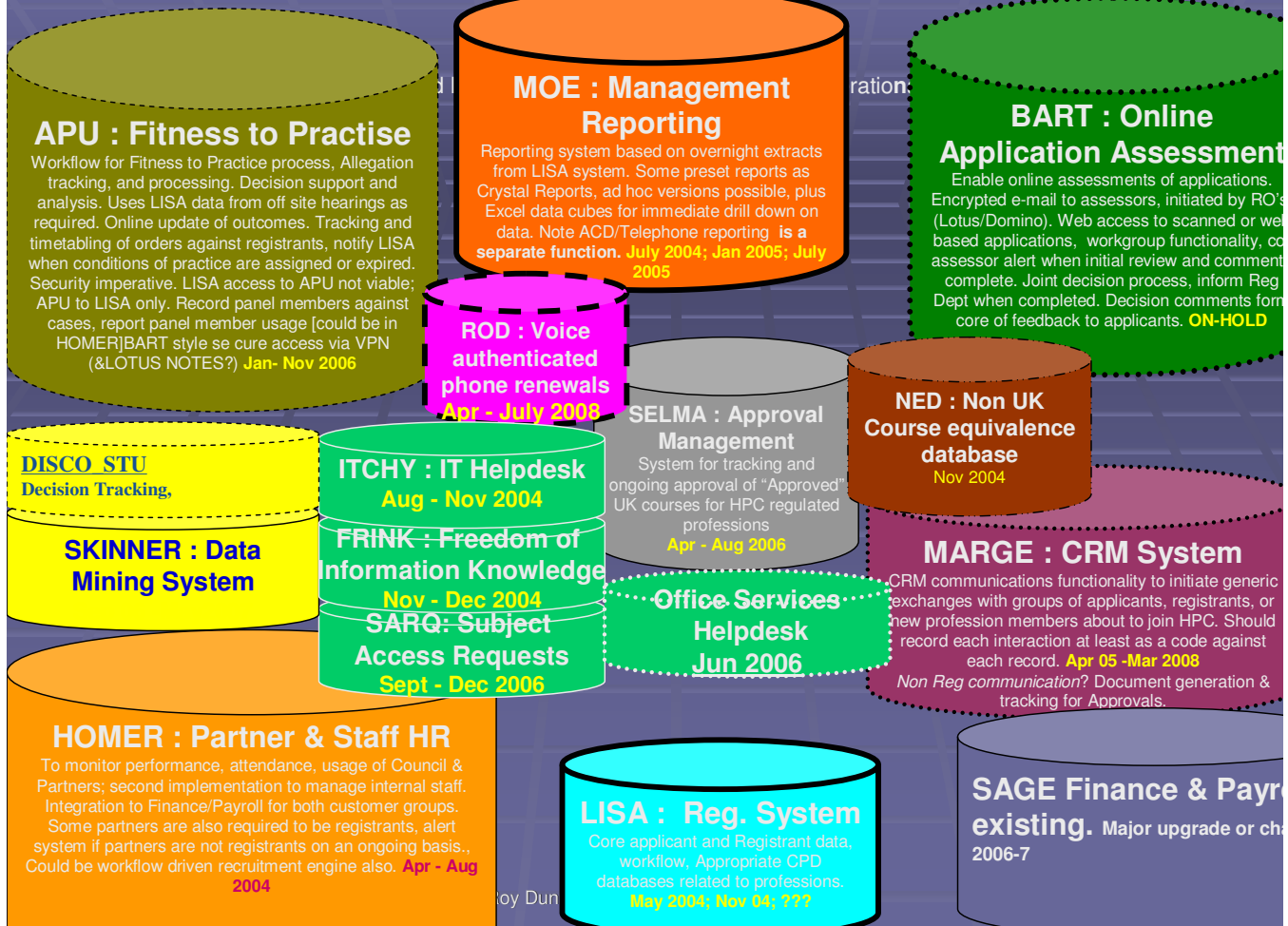
IT Strategy in a box – 2006-8

<p>IT DIRECTION</p> <p>Increasingly online with authentication</p> <p>Decreasing hardcopy</p> <p>Process flow mapped to ISO9001:2000 standard published to intranet</p> <p>Security aiming for ISO27001; annual white Hat penetration testing and remedial work.</p> <p>Avoid blind technology alleys</p>	<p>SOFTWARE</p> <p>MS Office 2003</p> <p>MS XP O/S where possible</p> <p>Crystal Reports 10</p> <p>MS Project</p> <p>Lotus Notes 6.5.4</p> <p><u>Production system</u></p> <ul style="list-style-type: none"> ● Solaris v8.5 >10 ● 2 x 2Mb assured separation leased line connection ● Java v1.3.1_04 ● Java Webstart v1.0.1_02 ● Oracle 9i ● Borland Enterprise Server v5.2 > 6.5 or Websphere
<p>COMPANY</p> <p>100 users, with full Microsoft Office, and Power users up to 20% of total.</p>	<p>HARDWARE</p> <p><u>Production system</u></p> <ul style="list-style-type: none"> ● Sun V880 Server with twin Ultrasparc III processors 2Gb RAM, multi Tb storage in house <p>Wintel Pentium</p> <p>Toshiba laptops</p> <p>Mitel IP telephony in house</p> <p>Archive voice if business requires</p>
<p>PROJECT AND IT GOVERNANCE</p> <p>MIT / CISR IT Governance model</p> <p>Programme Management</p> <p>Prioritisation of Helpdesk tickets by business priority</p>	<p>INFORMATION</p> <p>Publish to the web unless confidential</p> <p>Document control</p> <p>Controlled directory structures for doc mgmt in short term</p>
<p>DATA</p> <p>Replicated off site to DR server farm, nightly with function specific servers for remote operation</p> <p>Tape back ups nightly, monthly stored off site with vendor</p>	<p>INNOVATION</p> <p>Working remotely via VPN from encrypted laptops or desktop machines.</p> <p>Increase on-line usage for HPC processes and communication.</p> <p>Could be thin client in future</p>

IT Project Initiation



Enhanced Data Architecture at HPC



TODD Notes & Domino infrastructure Winter 03 - Spring 2004