

웹 애플리케이션 보고서

이 보고서는 웹 애플리케이션에 대한 중요 보안 정보를 포함하고 있습니다.

보안 보고서

이 보고서는 IBM Security AppScan Standard에서 작성하였습니다. 9.0.3.7 iFix003, 규칙: 12621
스캔 시작: 2018-09-20 오후 6:35:30

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- Mac OS X의 최신 버전으로 업그레이드하십시오.
- "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.
- "X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.
- "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.
- 금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.
- 웹 서버에서 HTTP TRACE 서포트를 불가능하게 하십시오.

보안 권고문

- MacOS X Finder Apache 디렉토리 콘텐츠 유출
- "Content-Security-Policy" 헤더가 누락되었습니다.
- "X-Content-Type-Options" 헤더가 누락되었습니다.
- "X-XSS-Protection" 헤더가 누락되었습니다.
- TRACE 및 TRACK HTTP 메소드 사용
- 숨겨진 디렉토리 발견

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- JavaScript
- 매개변수
- 주석
- 방문한 URL
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소개

이 보고서에는 IBM Security AppScan Standard가 수행한 웹 애플리케이션 보안 스캔의 결과가 포함되어 있습니다.

중간 심각도 문제: 1
낮은 심각도 문제: 20
이 보고서에 포함된 총 보안 문제: 21
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일반 정보

스캔 파일 이름: http@wcubec.snu.ac.kr
스캔 시작: 2018-09-20 오후 6:35:30
테스트 정책: Default

호스트: wcubec.snu.ac.kr
포트: 0
운영 체제: Unix
웹 서버: Apache
애플리케이션 서버: 모든







로그인 설정

로그인 메소드: 레코드된 로그인
동시 로그인: 사용
JavaScript 실행: 사용
세션 내 발견: 사용
세션 내 패턴:
추적/세션 ID 쿠키:
추적/세션 ID 매개변수:
로그인 순서:

요약










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문제 유형	문제 수
중 MacOS X Finder Apache 디렉토리 콘텐츠 노출	1 
하 "Content-Security-Policy" 헤더가 누락되었습니다.	5 
하 "X-Content-Type-Options" 헤더가 누락되었습니다.	5 
하 "X-XSS-Protection" 헤더가 누락되었습니다.	5 
하 TRACE 및 TRACK HTTP 메소드 사용	1 
하 숨겨진 디렉토리 발견	4 

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URL	문제 수
중 http://wcubec.snu.ac.kr/	5 
하 http://wcubec.snu.ac.kr/BEC.htm	3 
하 http://wcubec.snu.ac.kr/education.htm	3 
하 http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm	3 
하 http://wcubec.snu.ac.kr/people.htm	3 
하 http://wcubec.snu.ac.kr/cgi-bin/	1 
하 http://wcubec.snu.ac.kr/images/	1 
하 http://wcubec.snu.ac.kr/media/	1 
하 http://wcubec.snu.ac.kr/~root/	1 

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조치방안 태스크	문제 수
----------	------

중	Mac OS X의 최신 버전으로 업그레이드하십시오.	1	<div></div>
하	"Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.	5	<div></div>
하	"X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.	5	<div></div>
하	"X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.	5	<div></div>
하	금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.	4	<div></div>
하	웹 서버에서 HTTP TRACE 서포트를 불가능하게 하십시오.	1	<div></div>

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위험		문제 수	
중	제한된 파일을 포함하는 특정 웹 애플리케이션 가상 디렉토리의 콘텐츠를 검색하고 다운로드하는 것이 가능합니다.	1	<div></div>
하	사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.	15	<div></div>
하	속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.	15	<div></div>
하	합법적인 사용자로 위장하는 데 사용될 수 있는 고객 세션 및 쿠키를 빼내거나 조작하는 것이 가능하여 해커가 사용자 레코드를 보거나 변경할 수 있으며 해당 사용자처럼 트랜잭션을 수행할 수 있습니다.	1	<div></div>
하	사이트의 파일 시스템 구조에 대한 정보를 검색하는 것이 가능하고, 이는 공격자가 웹 사이트를 맵핑하도록 도와줄 것입니다.	4	<div></div>

원인 3

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원인		문제 수
중	써드파티 제품을 위한 최신 패치나 핫 픽스가 설치되지 않았습니다.	1
하	안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.	15
하	웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.	5

WASC 위험 분류

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위험	문제 수
기능 악용	1
디렉토리 색인화	1
정보 유출	19

문제 유형으로 정렬된 문제

중

MacOS X Finder Apache 디렉토리 콘텐츠 노출 1

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MacOS X Finder Apache 디렉토리 콘텐츠 노출

심각도: 중

CVSS 점수: 6.4

URL: <http://wcubec.snu.ac.kr/>

엔티티: .DS_Store (Page)

위험: 제한된 파일을 포함하는 특정 웹 애플리케이션 가상 디렉토리의 콘텐츠를 검색하고 다운로드하는 것이 가능합니다.

원인: 써드파티 제품을 위한 최신 패치나 핫 픽스가 설치되지 않았습니다.

수정사항: [Mac OS X의 최신 버전으로 업그레이드하십시오.](#)

이유: 테스트에서 Mac OS X Finder 디렉토리의 콘텐츠를 검색했습니다.

테스트 요청 및 응답:

```
GET /.DS_Store HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Last-Modified: Tue, 16 Nov 2010 11:07:39 GMT
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Accept-Ranges: bytes
Content-Length: 15364
ETag: "2d6c031-3c04-49529909934c0"
Date: Thu, 20 Sep 2018 09:53:42 GMT
Content-Type: text/plain
```

```
Budl
e sbwspblob @ @ @
i m a g e sbwspblob ~bplist000
```



```
\WindowBounds[ShowSidebar]ShowStatusBar[ShowPathbar[ShowToolbar\SidebarWidth_ {{662, 321}}, {818, 734}}  
i      Å  "<HTa|}~  
...  
...  
...
```

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"Content-Security-Policy" 헤더가 누락되었습니다.심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/people.htm>

엔티티: people.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 Content-Security-Policy 응답 헤더가 누락된 것을 발견했으며 이로 인해 다양한 사이트 간 인젝션 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```
GET /people.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html
```

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
  <title>SNU BEC group Type2 WCU Project</title>
  <meta name="generator" content="Namo WebEditor v6.0">
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
```

```

-->
</style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
vlink="purple">
<div align="left">
<p><a name="top"></a></p>
<table align="center" cellpadding="0" cellspacing="0" width="750">
<tbody>
<tr>
<td>
<td bgcolor="white" width="744">
<div align="center">
<p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"></p>
</div>
<font size="5">
<div align="center"> </div>
</font> </td>
</tr>
<tr>
<td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
<div align="center">
<p align="center"><font color="#666666"><span
style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
|&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
|&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
| <a href="results.htm">Results</a></span></font></p>
</div>
</td>
</tr>
</tbody>
</table>
<table align="center" border="0" width="597">
<tbody>
<tr>
<td width="591">
<p align="left"><b><span style="font-size: 20pt;"><font
color="#9900ff" face="Helvetica"><br>
People</font></span></b></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a href="#Dr.%20Kyungwon%20An,%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Kyungwon
An
(Principal Investigator)</span></font></a><span style="font-size: 12pt;"></span></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a
href="#Dr.%20Hyunseok%20Jeong,%20Assistant%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Hyunseok
Jeong
(Co-investigator)</span></font></a><span style="font-size: 12pt;"></span></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a
href="#Dr.%20Yong-il%20Shin,%20Invited%20Assistant%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Yong-il
Shin
(Foreign Scholar, Full-time
Co-investigator)</span></font></a><br>
<br>
</p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><span style="font-family: Helvetica; font-size: 18pt;"><b><font
face="Bodoni MT"><a name="Dr. Kyungwon An, Professor"></a></font></b></span></p>
<table align="center" border="0" cellpadding="0" width="591">
<tbody>

```

```

<tr>
<td height="68" width="591">
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left">&nbsp;<font face="Bodoni MT"><br>
</font></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><b><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 14pt;"><br>
Dr. Kyungwon An,
Professor</span></font></b></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><font face="Bodoni MT">&nbsp;</font></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 13pt;">&nbsp;&nbsp;&nbsp;- atomic
physics</span></font></p>
<p class="MsoNormal"
style="text-align: left; line-height:
...
...
...

```

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"Content-Security-Policy" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/BEC.htm>

엔티티: BEC.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 Content-Security-Policy 응답 헤더가 누락된 것을 발견했으며 이로 인해 다양한 사이트 간 인젝션 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```

GET /BEC.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/education.htm
Accept-Language: en-US,en;q=0.8

```

HTTP/1.1 **200** OK

```

Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4853
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta http-equiv="content-type" content="text/html; charset=euc-kr">
  <title>SNU BEC group Type2 WCU Project</title>
  <meta name="generator" content="Namo WebEditor v6.0">
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
  </style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
  vlink="purple">
<div align="left">
</div>
<div align="left">
<table align="center" cellpadding="0" cellspacing="0" width="750">
  <tbody>
    <tr>
      <td bgcolor="white" width="744">
        <div align="center">
          <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
            align="left"></p>
          </div>
          <font size="5">
            <div align="center"> </div>
          </font> </td>
        </tr>
        <tr>
          <td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
            <div align="center">
              <p align="center"><font color="#666666"><span
                style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
                |&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
                |&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
                | <a href="results.htm">Results</a></span></font></p>
            </div>
          </td>
        </tr>
      </tbody>
    </table>
    <table align="center" border="0" width="597">
      <tbody>
        <tr>
          <td width="591">
            <p align="left">&nbsp;</p>
            <p style="line-height: 200%;" align="left"><b><font
              color="#9900ff" face="Helvetica"><span style="font-size: 20pt;">Open
              Courseware: Special Seminars on Bose-Einstein Condensates (Fall, 2009)</span></font></b></p>
            <p class="MsoNormal" style="text-align: left; line-height: 200%;"
              align="left"><b><font face="Bodoni MT"> <span
                style="font-family: Helvetica; font-size: 13pt;">Synopsis</span></font></b><span
                style="font-size: 13pt;"></span></p>
            <p style="text-align: justify;"><font
              style="color: rgb(0, 0, 0); font-family: Arial;" size="+1"><span
                style="font-size: 11pt;">This lecture will introduce recent progresses
                in quantum gas experiments. Fundamental physics of ultracold atom
                system such as laser cooling and trapping techniques, and cold
                collisions will be presented. Various topics of current research will
                be discussed, including Bose-Einstein condensation, Spinor condensate,
                BCS-BEC crossover, Bose/Fermi-Hubbard physics in optical lattices, etc.
              </span></font><font style="font-family: Arial;" color="#6bf3fb"
                size="+1"><font style="font-size: 9pt;" color="#ffffff"><span
                  style="color: rgb(0, 0, 0);"></span></font></font><font
                face="Bodoni MT"><span style="font-family: Helvetica; font-size: 11pt;"></span></font><span
                  style="font-size: 13pt;"></span></p>
            <p class="MsoNormal" style="text-align: left; line-height: 200%;"

```

```

align="left"><b><font face="Bodoni MT"> <span
style="font-family: Helvetica; font-size: 13pt;">Online
Lectures</span></font></b><span style="font-size: 13pt;"></span></p>
  <p class="MsoNormal" style="text-align: left; line-height: 100%;"
align="left"><font face="Bodoni MT"> <span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture1_LaserCooling.htm">Lecture 01</a><br>
  </span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture2_Trapping.htm">Lecture 02</a><br>
  </span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture3_MakingBEC.htm">Lecture 03</a></span></font><br>
  <font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture4_BETheory.htm">Lecture 04</a><br>
  </span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture5_TrappedBEC.htm">Lecture 05</a><br>
  </span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture6_PhaseCoherence.htm">Lecture 06</a></span></font><br>
  </p>
  <p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"></font></p>
  <p class="MsoNormal"
style="text-align: left; line-heig
...
...
...

```

문제 3 / 5

TOC

"Content-Security-Policy" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/>

엔티티: (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 Content-Security-Policy 응답 헤더가 누락된 것을 발견했으며 이로 인해 다양한 사이트 간 인젝션 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```

GET / HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8

```

```

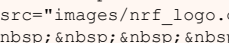
HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4595
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta name="GENERATOR" content="Namo WebEditor v6.0">
  <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
  <title>SNU BEC group Type2 WCU Project</title>
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
  </style>
</head>
<body>
<div align="left">
<table width="750" align="center" cellpadding="0" cellspacing="0">
  <tbody>
    <tr>
      <td height="29" width="744" bgcolor="white">
        <div align="center">
          <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
            align="left"></p>
          </div>
          <font size="5">
            <div align="center"> </div>
          </font>
        </td>
      </tr>
      <tr>
        <td bordercolor="black" height="18" width="744" bgcolor="#cccccc">
          <div align="center">
            <p align="center"><font color="#666666"><span
              style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
              |&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
              |&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
              | <a href="results.htm">Results</a></span></font></p>
            </div>
          </td>
        </tr>
      </tbody>
    </table>
    <table width="597" align="center" border="0">
      <tbody>
        <tr>
          <td width="591">
            <p align="left"><font face="Bodoni MT">&nbsp;</font></p>
            <p style="line-height: 125%;" align="justify"><font
              face="Bodoni MT"><span style="font-family: Helvetica; font-size: 18pt;">A</span></font><span
              style="font-family: Helvetica; font-size: 14pt;"><font face="Bodoni MT">
                </font></span><font face="Bodoni MT"><span
              style="font-family: Helvetica; font-size: 11pt;">Bose-Einstein
              condensate
              (BEC) is a new state of matter, occurring at extremely low temperature
              near
              absolute zero. All particles collapse into a same quantum ground state,
              forming
              a macroscopic quantum object with remarkable properties. Bose-Einstein
              condensation has been observed for the first time in dilute atomic
              gases in
              1995 (70 years after the theoretical prediction), finally allowing to
              study
              many fundamental quantum phenomena such as superfluidity, quantized
              vortices
              and matter wave interference. Now ultracold quantum gases define a new
              class of
              physical experiments. Because of the extreme cleanness of samples and
              the

```

unprecedented parameter control, the quantum gas experiments provide unique opportunities to directly simulate quantum many-body physics. This is a new approach to resolve the long-standing, unresolved problems of strongly correlated materials such as high-temperature superconductors and quantum magnets. Here we propose experimental study of strongly interacting systems, quantum-classical correspondence and quantum information by using ultracold atoms. The outcomes of our studies will provide valuable insight to understand fundamental physics behind high temperature superconductivity and metal-insulator transition, eventually facilitating development of new quantum materials, which is likely to serve as a growth-generating field in the future.


<p>The first BEC in Korea, produced by SNU BEC group</p>

<p> http://wcu.nrf.go.kr/  </p> <p> http://www.nrf.go.kr/htm/main/main.jsp  </p> <p> http://www.mest.go.kr/me_kor/index.jsp  </p>
--

"Content-Security-Policy" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm>

엔티티: spot-check-BEC-2010.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 Content-Security-Policy 응답 헤더가 누락된 것을 발견했으며 이로 인해 다양한 사이트 간 인젝션 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```
GET /lecture/spot-check-BEC-2010.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/research.htm
Accept-Language: en-US,en;q=0.8

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1619
Date: Thu, 20 Sep 2018 09:48:45 GMT
expires: 0
Content-Type: text/html

<html>

<head>
<meta name=Title content="PowerPoint Presentation - SNU BEC &#49324;&#50629;&#45800; (Type 2)">
<meta name=Keywords content="">
<meta http-equiv=Content-Type content="text/html; charset=windows-1252">
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link rel=Edit-Time-Data href="spot-check-BEC-2010_files/editdata.mso">
<link rel=OLE-Object-Data href="spot-check-BEC-2010_files/oledata.mso">
<title>PowerPoint Presentation - SNU BEC &#49324;&#50629;&#45800; (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate
href="spot-check-BEC-2010_files/kwan's%2017/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%98%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<meta http-equiv=expires content=0>
<script language=JavaScript src="spot-check-BEC-2010_files/script.js"></script><script
language=JavaScript><!--
LoadHTMLVersion();
if (g_ShowFSDefault ) FullScreen();//-->
</script>
</head>

<frameset rows="*,35" framespacing=1 frameborder=1>
<noframes>
<body>
<p>This page uses frames, but your browser doesn't support them.</p>
</body>
</noframes>
```

```

<frame src="spot-check-BEC-2010_files/frame.htm" name=MainFrame
marginheight=0 marginwidth=0>
<frameset cols="20%,*">
  <frame src="spot-check-BEC-2010_files/outline_navigation_bar.htm"
name=PPTotlNav marginheight=0 marginwidth=0 scrolling=no noresize>
  <frame src="spot-check-BEC-2010_files/navigation_bar.htm" name=PPTNav
marginheight=0 marginwidth=0 scrolling=no noresize>
</frameset>
</frameset>

</html>

GET /lecture/spot-check-BEC-2010_files/frame.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Host: wcubec.snu.ac.kr
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1595
Date: Thu, 20 Sep 2018 09:36:17 GMT
Content-Type: text/html

<html>

<head>
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link id=Main-File rel=Main-File href="spot-check-BEC-2010.htm">
<title>PowerPoint Presentation - SNU BEC &#49324;&#50629;&#45800; (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate
href="file:///localhost/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%9
8%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<script>
if ( ! top.PPTPRESENTATION ) {
  window.location.replace( "endshow.htm" );
}
</script><script language=JavaScript><!--
base = parent;/-->
</script><script language=JavaScript src=script.js></script>
</head>

<script> <!--
function getSlideName() {
  return parent.GetHrefObj( parent.g_currentSlide ).m_slideHref;
}

function getNotesName() {
  return parent.GetHrefObj( parent.g_currentSlide ).m_notesHref;
}

function restore() {
  self.location.reload();
}

function WriteMe() {
  if ( true )
    document.write( '<frameset cols="20%,*" id=PPTHorizAdjust >' +
      '<frame src="outline_collapsed.htm" name=PPTotl>' );
    var distribution;
    if ( parent.includeNotes )
      distribution = "*",20%";
    else
      distribution = "*",0";
    document.write('<frameset rows="'" + distribution + '\" id=PPTVertAdjust >' +
      '<frame src=' + getSlideName() + ' name=PPTSld>' +
      '<frame src=' + getNotesName() + ' name=PPTNts>' );
    document.write('</frameset>');
    if ( true )
      document.write(' </frameset>' );
  }

if ( parent.msie < 0 ) {

```

```

    self.onresize = restore;
}

WriteMe();
//-->

...
...
...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1993
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 3422
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...

```

문제 5 / 5

TOC

"Content-Security-Policy" 헤더가 누락되었습니다.

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/education.htm>

엔티티: education.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 Content-Security-Policy 응답 헤더가 누락된 것을 발견했으며 이로 인해 다양한 사이트 간 인젝션 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```

GET /education.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8

```

```

Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8

HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
  <head>
    <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
    <title>SNU BEC group Type2 WCU Project</title>
    <meta name="generator" content="Namo WebEditor v6.0">
    <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
    </style>
  </head>
  <body alink="red" bgcolor="white" link="blue" text="black"
    vlink="purple">
    <div align="left">
</div>
    <div align="left">
      <table align="center" cellpadding="0" cellspacing="0" width="750">
        <tbody>
          <tr>
            <td bgcolor="white" width="744">
              <div align="center">
                <p style="line-height: 100%; margin-top: 0pt;
margin-bottom: 0pt;" align="left"></p>
              </div>
              <font size="5">
                <div align="center"> </div>
              </font> </td>
          </tr>
          <tr>
            <td bordercolor="black" bgcolor="#cccccc" height="18"
width="744">
              <div align="center">
                <p align="center"><font color="#666666"><span
style="font-family: Helvetica; font-size: 12pt;"><a
href="index.htm">Home</a>
|&nbsp;<a href="people.htm">People</a> |&nbsp;<a
href="research.htm">Research</a>
|&nbsp;<a href="education.htm">Education</a> | <a
href="activities.htm">Activities</a>
| <a href="results.htm">Results</a></span></font></p>
              </div>
            </td>
          </tr>
        </tbody>
      </table>
      <table align="center" border="0" width="597">
        <tbody>
          <tr>
            <td width="591">
              <p align="left">&nbsp;<br>
</p>
              <p style="line-height: 200%;" align="left"><b><font
color="#9900ff" face="Helvetica"><span
style="font-size: 20pt;">Education</span></font></b><font
face="Bodoni MT"></font></p>
              <p class="MsoNormal" style="text-align: justify;
text-indent: 0px; line-height: 125%;"><font face="Bodoni
MT"><span style="font-family: Helvetica; font-size:

```

```
11pt;">Our
program
will
provide the opportunities for training
of 8 graduate students and 4 post-doctoral fellows
on average per year
in one
of the most active areas of modern physics. This
number amounts to a
total of
15 graduate students and 8 post-doctoral fellows in
the planned
research period
of five years. They will learn most developed laser
and vacuum
technology
involving the quantum gas experiments, as well as
important physical
concepts.
As a joint effort, our program will develop atomic
physics course for
graduate
students covering a broad range of up-to-date
subjects, taking
advantage of the
diverse backgrounds of the participants. Also, we
will provide various
seminars
and workshop to introduce the quantum gas
experiments to the physics
community
in Korea.
The current cold atom experiment expands its realm
crossing the
boundaries into
many other sub-fields such as many-body physics,
quantum optics and
quantum
chaos. We will look for common interests with other
physics subfields,
aiming
at interdisciplinary research activities.<
```

...
...
...

하

"X-Content-Type-Options" 헤더가 누락되었습니다. 5

TOC

문제 1 / 5

TOC

"X-Content-Type-Options" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/people.htm>

엔티티: people.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 X-Content-Type-Options 응답 헤더가 누락된 것을 발견했으며 이로 인해 드라이브 바이 다운로드 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```
GET /people.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
  <title>SNU BEC group Type2 WCU Project</title>
  <meta name="generator" content="Namo WebEditor v6.0">
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
  </style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
vlink="purple">
<div align="left">
<p><a name="top"></a></p>
<table align="center" cellpadding="0" cellspacing="0" width="750">
  <tbody>
    <tr>
      <td bgcolor="white" width="744">
        <div align="center">
          <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"></p>
          </div>
          <font size="5">
            <div align="center"> </div>
          </font> </td>
```

```

</tr>
<tr>
<td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
<div align="center">
<p align="center"><font color="#666666"><span
style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
|&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
|&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
| <a href="results.htm">Results</a></span></font></p>
</div>
</td>
</tr>
</tbody>
</table>
<table align="center" border="0" width="597">
<tbody>
<tr>
<td width="591">
<p align="left"><b><span style="font-size: 20pt;"><font
color="#9900ff" face="Helvetica"><br>
People</font></span></b></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a href="#Dr.%20Kyungwon%20An,%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Kyungwon
An
(Principal Investigator)</span></font></a><span style="font-size: 12pt;"></span></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a
href="#Dr.%20Hyunseok%20Jeong,%20Assistant%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Hyunseok
Jeong
(Co-investigator)</span></font></a><span style="font-size: 12pt;"></span></p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">-

</span></font><a
href="#Dr.%20Yong-il%20Shin,%20Invited%20Assistant%20Professor"><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 12pt;">Prof.
Yong-il
Shin
(Foreign Scholar, Full-time
Co-investigator)</span></font></a><br>
<br>
</p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><span style="font-family: Helvetica; font-size: 18pt;"><b><font
face="Bodoni MT"><a name="Dr. Kyungwon An, Professor"></a></font></b></span></p>
<table align="center" border="0" cellpadding="0" width="591">
<tbody>
<tr>
<td height="68" width="591">
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left">&nbsp;<font face="Bodoni MT"><br>
</font></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><b><font face="Bodoni MT"><span>
style="font-family: Helvetica; font-size: 14pt;"><br>
Dr. Kyungwon An,
Professor</span></font></b></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"><font face="Bodoni MT">&nbsp;</font></p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"

```

```

align="left"><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 13pt;">&nbsp;&nbsp;&nbsp;- atomic
physics</span></font></p>
<p class="MsoNormal"
style="text-align: left; line-height
...
...
...

```

문제 2 / 5

TOC

"X-Content-Type-Options" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/BEC.htm>

엔티티: BEC.htm (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 X-Content-Type-Options 응답 헤더가 누락된 것을 발견했으며 이로 인해 드라이브 바이 다운로드 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```

GET /BEC.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/education.htm
Accept-Language: en-US,en;q=0.8

```

```

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4853
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

```

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta http-equiv="content-type" content="text/html; charset=euc-kr">
  <title>SNU BEC group Type2 WCU Project</title>
  <meta name="generator" content="Namo WebEditor v6.0">
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->

```



```

</style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
vlink="purple">
<div align="left">
</div>
<div align="left">
<table align="center" cellpadding="0" cellspacing="0" width="750">
<tbody>
<tr>
<td>
<td bgcolor="white" width="744">
<div align="center">
<p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"></p>
</div>
<font size="5">
<div align="center"> </div>
</font> </td>
</tr>
<tr>
<td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
<div align="center">
<p align="center"><font color="#666666"><span
style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
|&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
|&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
| <a href="results.htm">Results</a></span></font></p>
</div>
</td>
</tr>
</tbody>
</table>
<table align="center" border="0" width="597">
<tbody>
<tr>
<td width="591">
<p align="left">&nbsp;</p>
<p style="line-height: 200%;" align="left"><b><font
color="#9900ff" face="Helvetica"><span style="font-size: 20pt;">Open
Courseware: Special Seminars on Bose-Einstein Condensates (Fall, 2009)</span></font></b></p>
<p class="MsoNormal" style="text-align: left; line-height: 200%;"
align="left"><b><font face="Bodoni MT"> <span
style="font-family: Helvetica; font-size: 13pt;">Synopsis</span></font></b><span
style="font-size: 13pt;"></span></p>
<p style="text-align: justify;"><font
style="color: rgb(0, 0, 0); font-family: Arial;" size="+1"><span
style="font-size: 11pt;">This lecture will introduce recent progresses
in quantum gas experiments. Fundamental physics of ultracold atom
system such as laser cooling and trapping techniques, and cold
collisions will be presented. Various topics of current research will
be discussed, including Bose-Einstein condensation, Spinor condensate,
BCS-BEC crossover, Bose/Fermi-Hubbard physics in optical lattices, etc.
</span></font><font style="font-family: Arial;" color="#6bf3fb"
size="+1"><font style="font-size: 9pt;" color="#ffffff"><span
style="color: rgb(0, 0, 0);"></span></font></font><font
face="Bodoni MT"><span style="font-family: Helvetica; font-size: 11pt;"></span></font><span
style="font-size: 13pt;"></span></p>
<p class="MsoNormal" style="text-align: left; line-height: 200%;"
align="left"><b><font face="Bodoni MT"> <span
style="font-family: Helvetica; font-size: 13pt;">Online
Lectures</span></font></b><span style="font-size: 13pt;"></span></p>
<p class="MsoNormal" style="text-align: left; line-height: 100%;"
align="left"><font face="Bodoni MT"> <span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture1_LaserCooling.htm">Lecture 01</a><br>
</span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture2_Trapping.htm">Lecture 02</a><br>
</span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture3_MakingBEC.htm">Lecture 03</a></span></font><br>
<font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture4_BETheory.htm">Lecture 04</a><br>
</span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture5_TrappedBEC.htm">Lecture 05</a><br>

```

```

</span></font><font face="Bodoni MT"><span
style="font-family: Helvetica; font-size: 11pt;">- <a
href="Lecture_Shin/Lecture6_PhaseCoherence.htm">Lecture 06</a></span></font><br>
</p>
<p class="MsoNormal" style="text-align: left;" align="left"><font
face="Bodoni MT"></font></p>
<p class="MsoNormal"
style="text-align: left; line-heig
...
...
...

```

문제 3 / 5

TOC

"X-Content-Type-Options" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/>

엔티티: (Page)

위험: 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

원인: 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

수정사항: "X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.

이유: AppScan에서 X-Content-Type-Options 응답 헤더가 누락된 것을 발견했으며 이로 인해 드라이브 바이 다운로드 공격에 더 많이 노출됩니다.

테스트 요청 및 응답:

```

GET / HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8

```

```

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4595
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

```

```

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
  <meta name="GENERATOR" content="Namo WebEditor v6.0">
  <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
  <title>SNU BEC group Type2 WCU Project</title>
  <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }

```

```

a:hover { text-decoration:none; }
-->
</style>
</head>
<body>
<div align="left">
<table width="750" align="center" cellpadding="0" cellspacing="0">
  <tbody>
    <tr>
      <td height="29" width="744" bgcolor="white">
        <div align="center">
          <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
            align="left"></p>
          </div>
          <font size="5">
            <div align="center"> </div>
          </font>
        </td>
      </tr>
      <tr>
        <td bordercolor="black" height="18" width="744" bgcolor="#cccccc">
          <div align="center">
            <p align="center"><font color="#666666"><span
              style="font-family: Helvetica; font-size: 12pt;"><a href="index.htm">Home</a>
              |&nbsp;<a href="people.htm">People</a> |&nbsp;<a href="research.htm">Research</a>
              |&nbsp;<a href="education.htm">Education</a> | <a href="activities.htm">Activities</a>
              | <a href="results.htm">Results</a></span></font></p>
            </div>
          </td>
        </tr>
      </tbody>
    </table>
    <table width="597" align="center" border="0">
      <tbody>
        <tr>
          <td width="591">
            <p align="left"><font face="Bodoni MT">&nbsp;</font></p>
            <p style="line-height: 125%;" align="justify"><font
              face="Bodoni MT"><span style="font-family: Helvetica; font-size: 18pt;">A</span></font><span
              style="font-family: Helvetica; font-size: 14pt;"><font face="Bodoni MT">
                </font></span><font face="Bodoni MT"><span
              style="font-family: Helvetica; font-size: 11pt;">Bose-Einstein
              condensate
              (BEC) is a new state of matter, occurring at extremely low temperature
              near
              absolute zero. All particles collapse into a same quantum ground state,
              forming
              a macroscopic quantum object with remarkable properties. Bose-Einstein
              condensation has been observed for the first time in dilute atomic
              gases in
              1995 (70 years after the theoretical prediction), finally allowing to
              study
              many fundamental quantum phenomena such as superfluidity, quantized
              vortices
              and matter wave interference. Now ultracold quantum gases define a new
              class of
              physical experiments. Because of the extreme cleanliness of samples and
              the
              unprecedented parameter control, the quantum gas experiments provide
              unique
              opportunities to directly simulate quantum many-body physics. This is a
              new
              approach to resolve the long-standing, unresolved problems of strongly
              correlated materials such as high-temperature superconductors and
              quantum
              magnets. Here we propose experimental study of strongly interacting
              systems,
              quantum-classical correspondence and quantum information by using
              ultracold
              atoms. The outcomes of our studies will provide valuable insight to
              understand
              fundamental physics behind high temperature superconductivity and
              metal-insulator transition, eventually facilitating development of new
              quantum
              materials, which is likely to serve as a growth-generating field in the
              future.</span></font></p>
          </td>
        </tr>
      </tbody>
    </table>

```

```

style="text-align: left; width: 100%; margin-left: auto; margin-right: auto;"
border="0" cellpadding="0" cellspacing="0">
    <tbody>
        <tr>
            <td style="text-align: center; vertical-align: middle;"><br>
            </td>
        </tr>
        <tr align="center">
            <td style="vertical-align: top;">
                <p><small>The first BEC in Korea, produced by SNU BEC group<br>
                </small></p>
                <p><small><br>
                </small></p>
            </td>
        </tr>
    </tbody>
</table>
</td>
</tr>
</tbody>
</table>
<table width="750" align="center" border="0">
    <tbody>
        <tr>
            <td valign="top" width="744">
                <p align="center"><a href="http://wcu.nrf.go.kr/"></a>
                &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~
                <a href="http://www.nrf.go.kr/htm/main/main.jsp"></a>
                &nbsp;&nbsp;&nbsp;&nbsp;&~
                <a href="http://www.mest.go.kr/me_kor/index.jsp"> |                                                                                                                                                                         |
| 심각도:                                         | <b>하</b>                                                                                                                                                                |
| CVSS 점수:                                     | 5.0                                                                                                                                                                     |
| URL:                                         | <a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm</a>                                           |
| 엔티티:                                         | spot-check-BEC-2010.htm (Page)                                                                                                                                          |
| 위험:                                          | <p>사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.</p> <p>속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.</p> |
| 원인:                                          | 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.                                                                                                                                     |
| 수정사항:                                        | <b>"X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.</b>                                                                                                                   |

**이유:** AppScan에서 X-Content-Type-Options 응답 헤더가 누락된 것을 발견했으며 이로 인해 드라이브 바이 다운로드 공격에 더 많이 노출됩니다.

**테스트 요청 및 응답:**

테스트 요청 및 응답:

```
GET /lecture/spot-check-BEC-2010.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/research.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1619
Date: Thu, 20 Sep 2018 09:48:45 GMT
expires: 0
Content-Type: text/html

<html>

<head>
<meta name=Title content="PowerPoint Presentation - SNU BEC 사업단 (Type
2)">
<meta name=Keywords content="">
<meta http-equiv=Content-Type content="text/html; charset=windows-1252">
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link rel=Edit-Time-Data href="spot-check-BEC-2010_files/editdata.mso">
<link rel=OLE-Object-Data href="spot-check-BEC-2010_files/oledata.mso">
<title>PowerPoint Presentation - SNU BEC 사업단 (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate
href="spot-check-BEC-
2010_files/kwan's%20i7/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%9
8%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<meta http-equiv=expires content=0>
<script language=JavaScript src="spot-check-BEC-2010_files/script.js"></script><script
language=JavaScript><!--
LoadHTMLVersion();
if (g_ShowFSDefault) FullScreen();//-->
</script>
</head>

<frameset rows="*,35" framespacing=1 frameborder=1>
<noframes>
<body>
<p>This page uses frames, but your browser doesn't support them.</p>
</body>
</noframes>
<frame src="spot-check-BEC-2010_files/frame.htm" name=MainFrame
marginheight=0 marginwidth=0>
<frameset cols="20%,*">
<frame src="spot-check-BEC-2010_files/outline_navigation_bar.htm"
name=PPTotlNav marginheight=0 marginwidth=0 scrolling=no noresize>
<frame src="spot-check-BEC-2010_files/navigation_bar.htm" name=PPTNav
marginheight=0 marginwidth=0 scrolling=no noresize>
</frameset>
</frameset>

</html>
```

```
GET /lecture/spot-check-BEC-2010_files/frame.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Host: wcubec.snu.ac.kr
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US
```

```
HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1595
Date: Thu, 20 Sep 2018 09:36:17 GMT
Content-Type: text/html

<html>
```

```

<head>
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link id=Main-File rel=Main-File href="spot-check-BEC-2010.htm">
<title>PowerPoint Presentation - SNU BEC 사업단 (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate
href="file:///localhost/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%9
8%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<script>
if (! top.PPTPRESENTATION) {
 window.location.replace("endshow.htm");
}
</script><script language=JavaScript><!--
base = parent;!-->
</script><script language=JavaScript src=script.js></script>
</head>

<script> <!--
function getSlideName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_slideHref;
}

function getNotesName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_notesHref;
}

function restore() {
 self.location.reload();
}

function WriteMe() {
 if (true)
 document.write('<frameset cols="\20%,*" id=PPTHorizAdjust >' +
 '<frame src="\outline_collapsed.htm" name=PPTot1>');
 var distribution;
 if (parent.includeNotes)
 distribution = "*,20%";
 else
 distribution = "*,0%";
 document.write('<frameset rows="\20%,*" id=PPTVertAdjust >' +
 '<frame src=' + getSlideName() + ' name=PPTSld>' +
 '<frame src=' + getNotesName() + ' name=PPTNts>');
 document.write('</frameset>');
 if (true)
 document.write(' </frameset>');
}

if (parent.msie < 0) {
 self.onresize = restore;
}

WriteMe();
-->

...
...
...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1993
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5

```

```
Content-Length: 3422
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...
```

## 문제 5 / 5

TOC

### "X-Content-Type-Options" 헤더가 누락되었습니다.

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/education.htm>

엔티티: education.htm (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-Content-Type-Options" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-Content-Type-Options 응답 헤더가 누락된 것을 발견했으며 이로 인해 드라이브 바이 다운로드 공격에 더 많이 노출됩니다.

#### 테스트 요청 및 응답:

```
GET /education.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
 <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
 <title>SNU BEC group Type2 WCU Project</title>
 <meta name="generator" content="Namo WebEditor v6.0">
 <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
 </style>
 </head>
 <body alink="red" bgcolor="white" link="blue" text="black">
```

```

vlink="purple">
<div align="left">
</div>
<div align="left">
 <table align="center" cellpadding="0" cellspacing="0" width="750">
 <tbody>
 <tr>
 <td bgcolor="white" width="744">
 <div align="center">
 <p style="line-height: 100%; margin-top: 0pt;
margin-bottom: 0pt;" align="left"></p>
 </div>

 <div align="center"> </div>
 </td>
 </tr>
 <tr>
 <td bordercolor="black" bgcolor="#cccccc" height="18"
width="744">
 <div align="center">
 <p align="center">Home
| People | Research
| Education | Activities
| Results</p>
 </div>
 </td>
 </tr>
 </tbody>
 </table>
 <table align="center" border="0" width="597">
 <tbody>
 <tr>
 <td width="591">
 <p align="left">

 </p>
 <p style="line-height: 200%;" align="left">Education</p>
 <p class="MsoNormal" style="text-align: justify;
text-indent: 0px; line-height: 125%;"><font face="Bodoni
MT"><span style="font-family: Helvetica; font-size:
11pt;">Our
program
will
provide the opportunities for training
of 8 graduate students and 4 post-doctoral fellows
on average per year
in one
of the most active areas of modern physics. This
number amounts to a
total of
15 graduate students and 8 post-doctoral fellows in
the planned
research period
of five years. They will learn most developed laser
and vacuum
technology
involving the quantum gas experiments, as well as
important physical
concepts.
As a joint effort, our program will develop atomic
physics course for
graduate
students covering a broad range of up-to-date
subjects, taking
advantage of the
diverse backgrounds of the participants. Also, we
will provide various
seminars
and workshop to introduce the quantum gas
experiments to the physics

```



```

community
in Korea.
The current cold atom experiment expands its realm
crossing the
boundaries into
many other sub-fields such as many-body physics,
quantum optics and
quantum
chaos. We will look for common interests with other
physics subfields,
aiming
at interdisciplinary research activities.<
...
...
...

```

하

"X-XSS-Protection" 헤더가 누락되었습니다. 5

TOC

문제 1 / 5

TOC

### "X-XSS-Protection" 헤더가 누락되었습니다.

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/people.htm>

엔티티: people.htm (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-XSS-Protection 응답 헤더가 누락된 것을 발견했으며 이로 인해 XSS(Cross-Site Scripting) 공격이 허용될 수 있습니다.

**테스트 요청 및 응답:**

```

GET /people.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8

```

```

HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5

```

Date: Thu, 20 Sep 2018 09:48:45 GMT  
Content-Type: text/html

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
 <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
 <title>SNU BEC group Type2 WCU Project</title>
 <meta name="generator" content="Namo WebEditor v6.0">
 <style>
 <!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
 </style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
vlink="purple">
<div align="left">
<p></p>
<table align="center" cellpadding="0" cellspacing="0" width="750">
 <tbody>
 <tr>
 <td bgcolor="white" width="744">
 <div align="center">
 <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"></p>
 </div>

 <div align="center"> </div>
 </td>
 </tr>
 <tr>
 <td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
 <div align="center">
 <p align="center">Home
| People | Research
| Education | Activities
| Results</p>
 </div>
 </td>
 </tr>
 </tbody>
 </table>
 <table align="center" border="0" width="597">
 <tbody>
 <tr>
 <td width="591">
 <p align="left">

People</p>
 <p class="MsoNormal" style="text-align: left;" align="left">-
 Prof.
Kyungwon
An
(Principal Investigator)</p>
 <p class="MsoNormal" style="text-align: left;" align="left">-
 Prof.
Hyunseok
Jeong
(Co-investigator)</p>
 <p class="MsoNormal" style="text-align: left;" align="left">-
```

```

Prof.
Yong-il
Shin
(Foreign Scholar, Full-time
Co-investigator)

</p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"></p>
<table align="center" border="0" cellpadding="0" width="591">
<tbody>
<tr>
<td height="68" width="591">
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left">

</p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left">

Dr. Kyungwon An,
Professor</p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"> </p>
<p class="MsoNormal"
style="text-align: left; line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
align="left"> - atomic
physics</p>
<p class="MsoNormal"
style="text-align: left; line-height:
...
...

```

## 문제 2 / 5

TOC

### "X-XSS-Protection" 헤더가 누락되었습니다.

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/BEC.htm>

엔티티: BEC.htm (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-XSS-Protection 응답 헤더가 누락된 것을 발견했으며 이로 인해 XSS(Cross-Site Scripting) 공격이 허용될 수 있습니다.

## 테스트 요청 및 응답:

```
GET /BEC.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/education.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4853
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html
```

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
 <meta http-equiv="content-type" content="text/html; charset=euc-kr">
 <title>SNU BEC group Type2 WCU Project</title>
 <meta name="generator" content="Namo WebEditor v6.0">
 <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
 </style>
</head>
<body alink="red" bgcolor="white" link="blue" text="black"
 vlink="purple">
<div align="left">
</div>
<div align="left">
<table align="center" cellpadding="0" cellspacing="0" width="750">
 <tbody>
 <tr>
 <td bgcolor="white" width="744">
 <div align="center">
 <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
 align="left"></p>
 </div>

 <div align="center"> </div>
 </td>
 </tr>
 <tr>
 <td bordercolor="black" bgcolor="#cccccc" height="18" width="744">
 <div align="center">
 <p align="center">Home
 | People | Research
 | Education | Activities
 | Results</p>
 </div>
 </td>
 </tr>
 </tbody>
 </table>
 <table align="center" border="0" width="597">
 <tbody>
 <tr>
 <td width="591">
 <p align="left"> </p>
 <p style="line-height: 200%;" align="left">Open
 Courseware: Special Seminars on Bose-Einstein Condensates (Fall, 2009)</p>
 <p class="MsoNormal" style="text-align: left; line-height: 200%;"
 align="left"> Synopsis<span
```

```

style="font-size: 13pt;"></p>
<p style="text-align: justify;">This lecture will introduce recent progresses
in quantum gas experiments. Fundamental physics of ultracold atom
system such as laser cooling and trapping techniques, and cold
collisions will be presented. Various topics of current research will
be discussed, including Bose-Einstein condensation, Spinor condensate,
BCS-BEC crossover, Bose/Fermi-Hubbard physics in optical lattices, etc.
<font style="font-family: Arial;" color="#6bf3fb"
size="+1"></p>
<p class="MsoNormal" style="text-align: left; line-height: 200%;"
align="left"> Online
Lectures</p>
<p class="MsoNormal" style="text-align: left; line-height: 100%;"
align="left"> - Lecture 01

- Lecture 02

- Lecture 03

- Lecture 04

- Lecture 05

- Lecture 06

</p>
<p class="MsoNormal" style="text-align: left;" align="left"></p>
<p class="MsoNormal"
style="text-align: left; line-heig
...
...
...

```

## 문제 3 / 5

TOC

### "X-XSS-Protection" 헤더가 누락되었습니다.

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/>

엔티티: (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-XSS-Protection 응답 헤더가 누락된 것을 발견했으며 이로 인해 XSS(Cross-Site Scripting) 공격이 허용될 수 있습니다.

**테스트 요청 및 응답:**

```
GET / HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8

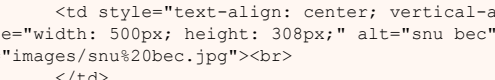
HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 4595
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html

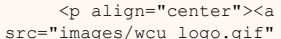
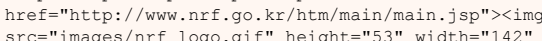
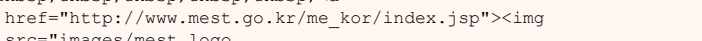

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
<head>
 <meta name="GENERATOR" content="Namo WebEditor v6.0">
 <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
 <title>SNU BEC group Type2 WCU Project</title>
 <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
 </style>
</head>
<body>
<div align="left">
<table width="750" align="center" cellpadding="0" cellspacing="0">
 <tbody>
 <tr>
 <td height="29" width="744" bgcolor="white">
 <div align="center">
 <p style="line-height: 100%; margin-top: 0pt; margin-bottom: 0pt;"
 align="left"></p>
 </div>

 <div align="center"> </div>

 </td>
 </tr>
 <tr>
 <td bordercolor="black" height="18" width="744" bgcolor="#cccccc">
 <div align="center">
 <p align="center">Home
 | People | Research
 | Education | Activities
 | Results</p>
 </div>
 </td>
 </tr>
 </tbody>
 </table>
<table width="597" align="center" border="0">
 <tbody>
 <tr>
 <td width="591">
 <p align="left"> </p>
 <p style="line-height: 125%;" align="justify">A
 Bose-Einstein
 condensate
```

```
(BEC) is a new state of matter, occurring at extremely low temperature near absolute zero. All particles collapse into a same quantum ground state, forming a macroscopic quantum object with remarkable properties. Bose-Einstein condensation has been observed for the first time in dilute atomic gases in 1995 (70 years after the theoretical prediction), finally allowing to study many fundamental quantum phenomena such as superfluidity, quantized vortices and matter wave interference. Now ultracold quantum gases define a new class of physical experiments. Because of the extreme cleanness of samples and the unprecedented parameter control, the quantum gas experiments provide unique opportunities to directly simulate quantum many-body physics. This is a new approach to resolve the long-standing, unresolved problems of strongly correlated materials such as high-temperature superconductors and quantum magnets. Here we propose experimental study of strongly interacting systems, quantum-classical correspondence and quantum information by using ultracold atoms. The outcomes of our studies will provide valuable insight to understand fundamental physics behind high temperature superconductivity and metal-insulator transition, eventually facilitating development of new quantum materials, which is likely to serve as a growth-generating field in the future.
```


The first BEC in Korea, produced by SNU BEC group

 <a href="http://wcu.nrf.go.kr/">http://wcu.nrf.go.kr/</a>  <a href="http://www.nrf.go.kr/hmt/main/main.jsp">http://www.nrf.go.kr/hmt/main/main.jsp</a>  <a href="http://www.mest.go.kr/me_kor/index.jsp">http://www.mest.go.kr/me_kor/index.jsp</a> 
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**"X-XSS-Protection" 헤더가 누락되었습니다.**심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm>

엔티티: spot-check-BEC-2010.htm (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-XSS-Protection 응답 헤더가 누락된 것을 발견했으며 이로 인해 XSS(Cross-Site Scripting) 공격이 허용될 수 있습니다.

**테스트 요청 및 응답:**

```
GET /lecture/spot-check-BEC-2010.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/research.htm
Accept-Language: en-US,en;q=0.8

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1619
Date: Thu, 20 Sep 2018 09:48:45 GMT
expires: 0
Content-Type: text/html

<html>

<head>
<meta name=Title content="PowerPoint Presentation - SNU BEC 사업단 (Type 2)">
<meta name=Keywords content="">
<meta http-equiv=Content-Type content="text/html; charset=windows-1252">
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link rel=Edit-Time-Data href="spot-check-BEC-2010_files/editdata.mso">
<link rel=OLE-Object-Data href="spot-check-BEC-2010_files/oledata.mso">
<title>PowerPoint Presentation - SNU BEC 사업단 (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate href="spot-check-BEC-2010_files/kwan's%20i7/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%98%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<meta http-equiv=expires content=0>
<script language=JavaScript src="spot-check-BEC-2010_files/script.js"></script><script language=JavaScript><!--
LoadHTMLVersion();
if (g_ShowFSDefault) FullScreen();//-->
</script>
</head>

<frameset rows="*,35" framespacing=1 frameborder=1>
<noframes>
```



```

<body>
<p>This page uses frames, but your browser doesn't support them.</p>
</body>
</noframes>
<frame src="spot-check-BEC-2010_files/frame.htm" name=MainFrame
marginheight=0 marginwidth=0>
<frameset cols="20%,*">
 <frame src="spot-check-BEC-2010_files/outline_navigation_bar.htm"
name=PPTotlNav marginheight=0 marginwidth=0 scrolling=no noresize>
 <frame src="spot-check-BEC-2010_files/navigation_bar.htm" name=PPTNav
marginheight=0 marginwidth=0 scrolling=no noresize>
</frameset>
</frameset>

</html>

GET /lecture/spot-check-BEC-2010_files/frame.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Host: wcubec.snu.ac.kr
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1595
Date: Thu, 20 Sep 2018 09:36:17 GMT
Content-Type: text/html

<html>

<head>
<meta name=ProgId content=PowerPoint.Slide>
<meta name=Generator content="Microsoft PowerPoint 2008">
<link id=Main-File rel=Main-File href="spot-check-BEC-2010.htm">
<title>PowerPoint Presentation - SNU BEC 사업단 (Type 2)</title>
<link title="Presentation File" type="application/powerpoint" rel=alternate
href="file:///localhost/Users/kwan/Documents/WCU/%EC%A4%91%EA%B0%84%ED%8F%89%EA%B0%80%202010/%ED%9
8%84%EC%9E%A5%ED%8F%89%EA%B0%80/spot-check-BEC-2010.pptx">
<script>
if (! top.PPTPRESENTATION) {
 window.location.replace("endshow.htm");
}
</script><script language=JavaScript><!--
base = parent;/-->
</script><script language=JavaScript src=script.js></script>
</head>

<script> <!--
function getSlideName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_slideHref;
}

function getNotesName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_notesHref;
}

function restore() {
 self.location.reload();
}

function WriteMe() {
 if (true)
 document.write('<frameset cols="\`20%,*\`" id=PPTHorizAdjust >' +
 '<frame src="\`outline_collapsed.htm\`" name=PPTotl>');
 var distribution;
 if (parent.includeNotes)
 distribution = "\`*,20%";
 else
 distribution = "\`*,0";
 document.write('<frameset rows="\`" + distribution + '\`" id=PPTVertAdjust >' +
 '<frame src=' + getSlideName() + ' name=PPTSld>' +
 '<frame src=' + getNotesName() + ' name=PPTNts>');
 document.write('</frameset>');
 if (true)

```

```

 document.write(' </frameset>');
 }

 if (parent.msie < 0) {
 self.onresize = restore;
 }

 WriteMe();
 //-->

 ...
 ...
 ...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 1993
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...

Referer: http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm
Accept-Language: en-US

HTTP/1.1 200 OK
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 3422
Date: Thu, 20 Sep 2018 09:36:17 GMT
...
...
...

```

## 문제 5 / 5

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### "X-XSS-Protection" 헤더가 누락되었습니다.

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/education.htm>

엔티티: education.htm (Page)

**위험:** 사용자 이름, 비밀번호, 머신 이름 및/또는 민감한 파일 위치 등과 같이 웹 애플리케이션에 대한 민감한 정보를 모으는 것이 가능합니다.  
속기 쉬운 사용자를 설득해서 사용자 이름, 비밀번호, 신용카드 번호, 주민등록 번호와 같은 민감한 정보를 제공하도록 하는 것이 가능합니다.

**원인:** 안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

**수정사항:** "X-XSS-Protection" 헤더를 사용하도록 서버를 구성하십시오.

**이유:** AppScan에서 X-XSS-Protection 응답 헤더가 누락된 것을 발견했으며 이로 인해 XSS(Cross-Site Scripting) 공격이 허용될 수 있습니다.

**테스트 요청 및 응답:**

```
GET /education.htm HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Referer: http://wcubec.snu.ac.kr/index.htm
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:45 GMT
Content-Type: text/html
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html>
 <head>
 <meta http-equiv="content-type" content="text/html; charset=EUC-KR">
 <title>SNU BEC group Type2 WCU Project</title>
 <meta name="generator" content="Namo WebEditor v6.0">
 <style>
<!--
a:link { text-decoration:none; }
a:visited { text-decoration:none; }
a:active { text-decoration:none; }
a:hover { text-decoration:none; }
-->
 </style>
 </head>
 <body alink="red" bgcolor="white" link="blue" text="black"
 vlink="purple">
 <div align="left">
 </div>
 <div align="left">
 <table align="center" cellpadding="0" cellspacing="0" width="750">
 <tbody>
 <tr>
 <td bgcolor="white" width="744">
 <div align="center">
 <p style="line-height: 100%; margin-top: 0pt;
margin-bottom: 0pt; align="left"></p>
 </div>

 <div align="center"> </div>
 </td>
 </tr>
 <tr>
 <td
 <td bordercolor="black" bgcolor="#cccccc" height="18"
width="744">
 <div align="center">
 <p align="center">Home
| People | Research
| Education | Activities
| Results</p>
 </div>
 </td>
 </tr>
 </tbody>
 </table>
 <table align="center" border="0" width="597">
 <tbody>
 <tr>
 <td width="591">
 <p align="left">

 </p>
 <p style="line-height: 200%;" align="left">Education<font
```

face="Bodoni MT"></font></p>  
<p class="MsoNormal" style="text-align: justify;  
text-indent: 0px; line-height: 125%;"><font face="Bodoni  
MT"><span style="font-family: Helvetica; font-size:  
11pt;">Our  
program  
will  
provide the opportunities for training  
of 8 graduate students and 4 post-doctoral fellows  
on average per year  
in one  
of the most active areas of modern physics. This  
number amounts to a  
total of  
15 graduate students and 8 post-doctoral fellows in  
the planned  
research period  
of five years. They will learn most developed laser  
and vacuum  
technology  
involving the quantum gas experiments, as well as  
important physical  
concepts.  
As a joint effort, our program will develop atomic  
physics course for  
graduate  
students covering a broad range of up-to-date  
subjects, taking  
advantage of the  
diverse backgrounds of the participants. Also, we  
will provide various  
seminars  
and workshop to introduce the quantum gas  
experiments to the physics  
community  
in Korea.  
The current cold atom experiment expands its realm  
crossing the  
boundaries into  
many other sub-fields such as many-body physics,  
quantum optics and  
quantum  
chaos. We will look for common interests with other  
physics subfields,  
aiming  
at interdisciplinary research activities.<

...  
...  
...

## TRACE 및 TRACK HTTP 메소드 사용

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/>

엔티티: wcubec.snu.ac.kr (Page)

위험: 합법적인 사용자로 위장하는 데 사용될 수 있는 고객 세션 및 쿠키를 빼내거나 조작하는 것이 가능하여 해커가 사용자 레코드를 보거나 변경할 수 있으며 해당 사용자처럼 트랜잭션을 수행할 수 있습니다.

원인: 웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

수정사항: 웹 서버에서 HTTP TRACE 서포트를 불가능하게 하십시오.

**이유:** 응답 콘텐츠 유형(메시지/http) 및 응답의 요청 텍스트와 헤더의 에코는 서버에 TRACE/TRACK 메소드가 사용되는지를 표시합니다.

**테스트 요청 및 응답:**

```
TRACE /%3Cscript%3Ealert(1234)%3C/script%3E HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 200 OK
Transfer-Encoding: chunked
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Date: Thu, 20 Sep 2018 09:48:38 GMT
Content-Type: message/http
```

```
TRACE /%3Cscript%3Ealert(1234)%3C/script%3E HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8
```

하

숨겨진 디렉토리 발견

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문제 1 / 4

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## 숨겨진 디렉토리 발견

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/media/>

엔티티: media/ (Page)

위험: 사이트의 파일 시스템 구조에 대한 정보를 검색하는 것이 가능하고, 이는 공격자가 웹 사이트를 맵핑하도록 도와줄 것입니다.

원인: 웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

수정사항: 금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.

**이유:** 테스트에서 서버에 숨겨진 디렉토리를 감지하려고 했습니다. 403 Forbidden 응답은 비록 액세스는 허용되지 않아도 디렉토리가 존재함을 보여줍니다.

**테스트 요청 및 응답:**

```
GET /media/ HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 403 Forbidden
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 51
Date: Thu, 20 Sep 2018 09:53:42 GMT
Content-Type: text/html; charset=iso-8859-1
```

You don't have permission to access on this server.

## 문제 2 / 4

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## 숨겨진 디렉토리 발견

심각도: 하

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/cgi-bin/>

엔티티: cgi-bin/ (Page)

위험: 사이트의 파일 시스템 구조에 대한 정보를 검색하는 것이 가능하고, 이는 공격자가 웹 사이트를 맵핑하도록 도와줄 것입니다.

원인: 웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

수정사항: 금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.

**이유:** 테스트에서 서버에 숨겨진 디렉토리를 감지하려고 했습니다. 403 Forbidden 응답은 비록 액세스는 허용되지 않아도 디렉토리가 존재함을 보여줍니다.

## 테스트 요청 및 응답:

```
GET /cgi-bin/ HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8

HTTP/1.1 403 Forbidden
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 51
Date: Thu, 20 Sep 2018 09:53:42 GMT
Content-Type: text/html; charset=iso-8859-1

You don't have permission to access on this server.
```

## 문제 3 / 4

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### 숨겨진 디렉토리 발견

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/images/>

엔티티: images/ (Page)

위험: 사이트의 파일 시스템 구조에 대한 정보를 검색하는 것이 가능하고, 이는 공격자가 웹 사이트를 맵핑하도록 도와줄 것입니다.

원인: 웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

수정사항: 금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.

**이유:** 테스트에서 서버에 숨겨진 디렉토리를 감지하려고 했습니다. 403 Forbidden 응답은 비록 액세스는 허용되지 않아도 디렉토리가 존재함을 보여줍니다.

## 테스트 요청 및 응답:

```
GET /images/ HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8

HTTP/1.1 403 Forbidden
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 51
Date: Thu, 20 Sep 2018 09:53:42 GMT
Content-Type: text/html; charset=iso-8859-1

You don't have permission to access on this server.
```

## 숨겨진 디렉토리 발견

심각도: **하**

CVSS 점수: 5.0

URL: <http://wcubec.snu.ac.kr/~root/>

엔티티: ~root/ (Page)

**위험:** 사이트의 파일 시스템 구조에 대한 정보를 검색하는 것이 가능하고, 이는 공격자가 웹 사이트를 맵핑하도록 도와줄 것입니다.

**원인:** 웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

**수정사항:** 금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.

**이유:** 테스트에서 서버에 숨겨진 디렉토리를 감지하려고 했습니다. 403 Forbidden 응답은 비록 액세스는 허용되지 않아도 디렉토리가 존재함을 보여줍니다.

## 테스트 요청 및 응답:

```
GET /~root/ HTTP/1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; rv:11.0) like Gecko
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Host: wcubec.snu.ac.kr
Upgrade-Insecure-Requests: 1
Connection: keep-alive
Accept-Language: en-US,en;q=0.8
```

```
HTTP/1.1 403 Forbidden
Connection: close
Server: Apache/2.2.20 (Unix) mod_ssl/2.2.20 OpenSSL/0.9.8e-fips-rhel5
Content-Length: 51
Date: Thu, 20 Sep 2018 09:53:42 GMT
Content-Type: text/html; charset=iso-8859-1
```

You don't have permission to access on this server.



# 수정 권장사항

중

Mac OS X의 최신 버전으로 업그레이드하십시오.

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## 이 태스크가 수정하는 문제 유형

- MacOS X Finder Apache 디렉토리 콘텐츠 노출

### 일반

Mac OS X 10.1 또는 그 이전 버전으로 업그레이드하십시오. 다음 웹 페이지에서 다운로드할 수 있습니다.  
<http://www.info.apple.com/support/downloads.html>

하

"Content-Security-Policy" 헤더를 사용하도록 서버를 구성하십시오.

TOC

## 이 태스크가 수정하는 문제 유형

- "Content-Security-Policy" 헤더가 누락되었습니다.

### 일반

"Content-Security-Policy" 헤더를 전송하도록 서버를 구성하십시오.

Apache의 경우

[http://httpd.apache.org/docs/2.2/mod/mod\\_headers.html](http://httpd.apache.org/docs/2.2/mod/mod_headers.html)

내용을 참조하십시오.

IIS의 경우

<https://technet.microsoft.com/pl-pl/library/cc753133%28v=ws.10%29.aspx>

내용을 참조하십시오.

NGINX의 경우

[http://nginx.org/en/docs/http/nginx\\_http\\_headers\\_module.html](http://nginx.org/en/docs/http/nginx_http_headers_module.html)

내용을 참조하십시오.

## 이 태스크가 수정하는 문제 유형

- "X-Content-Type-Options" 헤더가 누락되었습니다.

### 일반

모든 발신 요청에서 "nosniff" 값을 사용한 "X-Content-Type-Options" 헤더를 전송하도록 서버를 구성하십시오.

Apache의 경우

[http://httpd.apache.org/docs/2.2/mod/mod\\_headers.html](http://httpd.apache.org/docs/2.2/mod/mod_headers.html)

내용을 참조하십시오.

IIS의 경우

<https://technet.microsoft.com/pl-pl/library/cc753133%28v=ws.10%29.aspx>

내용을 참조하십시오.

NGINX의 경우

[http://nginx.org/en/docs/http/ngx\\_http\\_headers\\_module.html](http://nginx.org/en/docs/http/ngx_http_headers_module.html)

내용을 참조하십시오.

## 이 태스크가 수정하는 문제 유형

- "X-XSS-Protection" 헤더가 누락되었습니다.

### 일반

모든 발신 요청에서 "1" 값(예: 사용)을 사용한 "X-XSS-Protection" 헤더를 전송하도록 서버를 구성하십시오.

Apache의 경우

[http://httpd.apache.org/docs/2.2/mod/mod\\_headers.html](http://httpd.apache.org/docs/2.2/mod/mod_headers.html)

내용을 참조하십시오.

IIS의 경우

<https://technet.microsoft.com/pl-pl/library/cc753133%28v=ws.10%29.aspx>

내용을 참조하십시오.

NGINX의 경우

[http://nginx.org/en/docs/http/ngx\\_http\\_headers\\_module.html](http://nginx.org/en/docs/http/ngx_http_headers_module.html)

내용을 참조하십시오.

하

금지된 자원에 대해서 "404 - Not Found" 응답 상태 코드를 발행하거나 완전히 제거하십시오.

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## 이 태스크가 수정하는 문제 유형

- 숨겨진 디렉토리 발견

### 일반

엑세스 제어되었던 자원이 더이상 필요 없어지면 사이트에서 제거하십시오.

가능하다면, "403 - Forbidden" 대신 "404 - Not Found" 응답 상태 코드를 실행하십시오. 이를 통해 사이트에 디렉토리가 존재하는지를 애매하게 하여, 사이트 구조가 노출되는 것을 막을 수 있습니다.

하

웹 서버에서 HTTP TRACE 서포트를 불가능하게 하십시오.

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## 이 태스크가 수정하는 문제 유형

- TRACE 및 TRACK HTTP 메소드 사용

### 일반

HTTP TRACE 기능을 비활성화시키십시오.

Apache와 MS IIS에 대한 임시 조치방법은 다음과 같습니다:

- Apache HTTP 서버의 경우: **Apache mod\_rewrite** 모듈을 사용하여 HTTP TRACE 요청을 거부하거나 사이트 요구사항 및 정책을 충족하는 데 필요한 메소드만 허가하십시오.

- Microsoft Internet Information Services(IIS)의 경우: **URLScan** 도구를 사용하여 HTTP TRACE 요청을 거부하거나 사이트 요구사항 및 정책을 충족하는 데 필요한 메소드만 허가하십시오.

# 보안 권고문

## MacOS X Finder Apache 디렉토리 콘텐츠 유출

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### 테스트 유형:

인프라스트럭처 테스트

### 위험 분류:

디렉토리 색인화

### 원인:

써드파티 제품을 위한 최신 패치나 핫 픽스가 설치되지 않았습니다.

### 보안 위험:

### 영향 받는 제품:

### CWE:

548

### X-Force:

6687

### 참조:

벤더 사이트

BugTraq BID: 3316

Bugtraq 메시지

Apple의 보안 업데이트 페이지

### 기술적 설명:

MacOS X Finder 유틸리티를 통해 디렉토리의 내용을 열람할 때, ".DS\_Store"이라는 숨겨진 파일이 작성됩니다. 이 파일은 디렉토리의 내용과 파일에 대한 인덱스를 포함하고 있습니다. 공격자는 이 정보를 바탕으로 웹 사이트의 구조나 내용을 확인할 수 있습니다.

### 샘플 악용:

웹 사이트에 /some\_directory라는 가상 디렉토리가 있다고 가정하는 경우, 다음 요청은 해당 콘텐츠를 검색합니다.

[http://TARGET/some\\_directory/.DS\\_Store](http://TARGET/some_directory/.DS_Store)

참고: '.DS\_Store' 파일의 콘텐츠는 ASCII 및 유니코드의 혼합이며, 이를 지원하는 뷰어로만 볼 수 있습니다.

## "Content-Security-Policy" 헤더가 누락되었습니다.

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### 테스트 유형:

애플리케이션 레벨 테스트

### 위협 분류:

정보 유출

### 원인:

안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

### 보안 위험:

- 
- 

### 영향 받는 제품:

### CWE:

200

### 참조:

유용한 [HTTP](#) 헤더 목록  
[콘텐츠 보안 정책 소개](#)

### 기술적 설명:

"Content-Security-Policy" 헤더는 브라우저가 페이지를 렌더링하는 방식을 수정하여 XSS(Cross-site scripting)를 포함한 여러 사이트 간 인젝션으로부터 보호하도록 디자인되었습니다. 웹 사이트의 올바른 오퍼레이션을 금지하지 않도록 헤더 값을 올바르게 설정하는 것이 중요합니다. 예를 들어 헤더가 인라인 JavaScript의 실행을 금지하도록 설정되면 웹 사이트는 해당 페이지에서 인라인 JavaScript를 사용하지 않아야 합니다.

## "X-Content-Type-Options" 헤더가 누락되었습니다.

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### 테스트 유형:

애플리케이션 레벨 테스트

#### 위협 분류:

정보 유출

#### 원인:

안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

#### 보안 위험:

- 
- 

#### 영향 받는 제품:

#### CWE:

200

#### 참조:

유용한 HTTP 헤더 목록

MIME 유형의 보안 위험 줄이기

#### 기술적 설명:

"X-Content-Type-Options" 헤더("nosniff" 값 포함)는 IE 및 Chrome에서 콘텐츠 유형의 응답을 무시하는 것을 방지합니다.

이 조치는 신뢰되지 않은 콘텐츠(예: 사용자 업로드 콘텐츠)가 사용자 브라우저에서 실행되는 것을 방지할 수 있습니다 (예를 들어, 악성 이름 지정 이후).

## "X-XSS-Protection" 헤더가 누락되었습니다.

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#### 테스트 유형:

애플리케이션 레벨 테스트

#### 위협 분류:

정보 유출

#### 원인:

안전하지 않은 웹 애플리케이션 프로그래밍 또는 환경 설정입니다.

#### 보안 위험:

- 
- 

#### 영향 받는 제품:

## CWE:

200

## 참조:

[유용한 HTTP 헤더 목록](#)

[IE XSS 필터](#)

## 기술적 설명:

사용자가 XSS(Cross-site scripting) 필터를 사용 안함으로 설정할지라도 "X-XSS-Protection" 헤더는 해당 필터를 사용 모드로 강제 실행합니다.

이 필터는 최신 웹 브라우저(IE 8+, Chrome 4+)에 기본 제공되며 보통 기본적으로 사용됩니다. 해당 필터는 XSS(Cross-site scripting)에 대한 유일한 첫 방어로 디자인되지 않았지만 추가적인 보호 계층의 역할을 수행합니다.

# TRACE 및 TRACK HTTP 메소드 사용

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## 테스트 유형:

인프라스트럭처 테스트

## 위험 분류:

기능 악용

## 원인:

웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

## 보안 위험:

## 영향 받는 제품:

## CWE:

16

## X-Force:

31774

## 참조:

[CERT 문제 참고](#)

[WhiteHat Security의 XST 기사](#)

[Bugtraq 메시지](#)

[RFC2616](#)

## 기술적 설명:

RFC2616(Section 9.8 - HTTP 'TRACE' 메소드)의 설명:

"TRACE 메소드는 원격, 요청 메시지의 애플리케이션 계층 루프백 호출에 사용됩니다. 요청의 최종 수신자는 반드시 송신자에게 200(OK) 응답의 내용(body)로 수신한 메시지를 반송해야 합니다. (중략) TRACE는 송신자가 반대편에서 수신한 내용을 확인할 수 있게하여 테스트나 점검 정보로서 사용할 수 있습니다. (후략)"RFC2616에 지정된 것처럼, 전체 HTTP 요청은 HTTP 헤더를 포함하여 TRACE 응답 본문에 반송됩니다. 이 HTTP 헤더는 세션 토큰이나 쿠키, 인증 정보와 같은 중요한 정보를 포함하고 있습니다. TRACE 응답의 내용이 DOM(Document Object Model) 인터페이스를 통해 스크립트 코드에 액세스 가능하기 때문에, 공격자는 중요한 정보에 액세스하고 MS Internet Explorer 6.0 SP1에서 소개된 "HttpOnly" 쿠키를 무시하기 위해 웹 브라우저의 취약성(Cross Domain 취약성)을 악용할 수 있습니다.

## 숨겨진 디렉토리 발견

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### 테스트 유형:

인프라스트럭처 테스트

### 위험 분류:

정보 유출

### 원인:

웹 서버 또는 애플리케이션 서버가 안전하지 않은 유형으로 구성되어 있습니다.

### 보안 위험:

### 영향 받는 제품:

### CWE:

200

### X-Force:

52599

### 기술적 설명:

웹 애플리케이션은 사이트에서 디렉토리의 존재를 유출합니다. 디렉토리가 해당 콘텐츠를 목록화 하지 않더라도, 이 정보로 공격자는 사이트에 대한 추가 공격을 할 수 있습니다. 예를 들어, 디렉토리 이름을 알게되면, 공격자는 해당 디렉토리에 존재하는 콘텐츠 유형 및 파일 이름 또는 서브 디렉토리를 추측할 수 있고, 액세스를 시도할 수 있습니다. 중요한 콘텐츠 일수록 이 이슈는 더 심각할 수 있습니다.



# 애플리케이션 데이터

URL
<a href="http://wcubec.snu.ac.kr/">http://wcubec.snu.ac.kr/</a>
<a href="http://wcubec.snu.ac.kr/people.htm">http://wcubec.snu.ac.kr/people.htm</a>
<a href="http://wcubec.snu.ac.kr/research.htm">http://wcubec.snu.ac.kr/research.htm</a>
<a href="http://wcubec.snu.ac.kr/education.htm">http://wcubec.snu.ac.kr/education.htm</a>
<a href="http://wcubec.snu.ac.kr/activities.htm">http://wcubec.snu.ac.kr/activities.htm</a>
<a href="http://wcubec.snu.ac.kr/results.htm">http://wcubec.snu.ac.kr/results.htm</a>
<a href="http://wcubec.snu.ac.kr/jhlfest-en.htm">http://wcubec.snu.ac.kr/jhlfest-en.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/script.js">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/script.js</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/frame.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/frame.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_navigation_bar.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_navigation_bar.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/navigation_bar.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/navigation_bar.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/blank_notes.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/blank_notes.htm</a>
<a href="http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm">http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm</a>
<a href="http://wcubec.snu.ac.kr/BEC.htm">http://wcubec.snu.ac.kr/BEC.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/script.js">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/script.js</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/frame.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/frame.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/outline_navigation_bar.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/outline_navigation_bar.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/navigation_bar.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/navigation_bar.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/outline_collapsed.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/outline_collapsed.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/blank_notes.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/blank_notes.htm</a>
<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/slide0029.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/slide0029.htm</a>
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<http://wcubec.snu.ac.kr/SNOW.htm>  
<http://wcubec.snu.ac.kr/SNOW-program.htm>  
<http://wcubec.snu.ac.kr/satellite-WOMA2011.htm>  
<http://wcubec.snu.ac.kr/jhlfest/registration-en.htm>  
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[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture5\\_TrappedBEC\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture5_TrappedBEC_files/script.js)  
[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture6\\_PhaseCoherence\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture6_PhaseCoherence_files/script.js)  
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<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/Lecture1_LaserCooling.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/Lecture1_LaserCooling.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/AMP01_files/AMP01.htm">http://wcubec.snu.ac.kr/lecture/AMP01_files/AMP01.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/AMP14_files/AMP14.htm">http://wcubec.snu.ac.kr/lecture/AMP14_files/AMP14.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/newlight_files/newlight.htm">http://wcubec.snu.ac.kr/lecture/newlight_files/newlight.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/light-teal_files/light-teal.htm">http://wcubec.snu.ac.kr/lecture/light-teal_files/light-teal.htm</a>	응답 상태 '404' - 찾을 수 없음
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<a href="http://wcubec.snu.ac.kr/Lecture_Shin/Lecture4_BECtheory_files/Lecture4_BECtheory.htm">http://wcubec.snu.ac.kr/Lecture_Shin/Lecture4_BECtheory_files/Lecture4_BECtheory.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/AMP02_files/AMP02.htm">http://wcubec.snu.ac.kr/lecture/AMP02_files/AMP02.htm</a>	응답 상태 '404' - 찾을 수 없음

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<a href="http://wcubec.snu.ac.kr/lecture/AMP03_files/AMP03.htm">http://wcubec.snu.ac.kr/lecture/AMP03_files/AMP03.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture/AMP21_files/AMP21.htm">http://wcubec.snu.ac.kr/lecture/AMP21_files/AMP21.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/quantum-world.htm">http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/quantum-world.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/Measurement-and-Decoherence.htm">http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/Measurement-and-Decoherence.htm</a>	응답 상태 '404' - 찾을 수 없음
<a href="http://wcubec.snu.ac.kr/media/">http://wcubec.snu.ac.kr/media/</a>	응답 상태 '403' - 금지됨
<a href="http://wcubec.snu.ac.kr/cgi-bin/">http://wcubec.snu.ac.kr/cgi-bin/</a>	응답 상태 '403' - 금지됨
<a href="http://wcubec.snu.ac.kr/images/">http://wcubec.snu.ac.kr/images/</a>	응답 상태 '403' - 금지됨
<a href="http://wcubec.snu.ac.kr/~root/">http://wcubec.snu.ac.kr/~root/</a>	응답 상태 '403' - 금지됨

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[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/script.js](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if (!g_supportsPPTHTML) return
 if (slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt (SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if (g_scaleHyperlinks)
 InitHLinkArray()
 if (g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if (IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn))
 document.oncontextmenu=parent._CM;
 self.focus();
}
```

```

 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playList();
}

```

```

parent.createCM();
if(!g_supportsPPTHTML) return
if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
self.focus();

}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

<http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010.htm>

```
//<!--
LoadHTMLVersion();
if (g_ShowFSDefault) FullScreen();//-->
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/script.js](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
```

```

function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

```



```

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {
 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/frame.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/frame.htm)

```

if (! top.PPTPRESENTATION) {
 window.location.replace("endshow.htm");
}

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/frame.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/frame.htm)

```

//<!--
base = parent;!-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/frame.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/frame.htm)

```

//<!--
function getSlideName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_slideHref;
}

function getNotesName() {
 return parent.GetHrefObj(parent.g_currentSlide).m_notesHref;
}

function restore() {
 self.location.reload();
}

function WriteMe() {
 if (true)
 document.write('<frameset cols=\'"20%,*\'" id=PPTHorizAdjust >' +
'<frame src=\'outline_collapsed.htm\' name=PPTotl>');
}

```

```

 var distribution;
 if (parent.includeNotes)
 distribution = "*",20%";
 else
 distribution = "*",0";
 document.write('<frameset rows=\' + distribution + \' id=PPTVertAdjust >' +
'<frame src=' + getSlideName() + ' name=PPTSld>' +
'<frame src=' + getNotesName() + ' name=PPTNts>');
 document.write('</frameset>');
 if (true)
 document.write(' </frameset>');
}

if (parent.msie < 0) {
 self.onresize = restore;
}

WriteMe();
//-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/navigation\\_bar.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/navigation_bar.htm)

```

//<!--
function restore() {
 if(navigator.platform != "MacPPC")
 self.location.reload();
}

function WriteBody()
{
 if(window.name != "PPTNav") return;

 document.writeln('<table width=\'100%\' border=0 valign=top cellpadding=0 cellspacing=0> <tr> ');
 drawing_app = false;
 if (parent.includeNotes && !false) {
 document.write('<td align=left>' +
' ' + ' </td> '
);
 }

 document.write('<td align=center valign=top> <table border=0 valign=top cellpadding=0 cellspacing=0>
<tr><td align=right>');

 innerText = "";
 if (parent.GetHrefObj(parent.g_currentSlide).m_origVisibility == 1 && !parent.g_allHidden)
 innerText = "Slide " + parent.GetCurrentSlideNum() + " of " + parent.GetNumSlides();
 else
 innerText = "Hidden Slide";

 if (drawing_app) {
 document.write('');
 document.write(' ');
 }

 fEnable = ((parent.g_currentSlide != 1 && parent.GetHrefObj(parent.g_currentSlide - 1).m_visibility ==
1)) ||
(parent.GetCurrentSlideNum() > 1);

 if(fEnable)
 {
 prevBtn = "prev_active.gif";
 document.write('');
 }
 else
 prevBtn = "prev_disabled.gif";

 document.write('');

 if(fEnable)
 document.write('');
}

```

```

document.write('</td> <td align=center> ')
document.write(' ' + innerText + ' ');
document.write('</td> <td align=left>');

fEnable = (parent.GetCurrentSlideNum() != parent.GetNumSlides());
if(fEnable)
{
 nextBtn = "next_active.gif";
 document.write('');
}
else
 nextBtn = "next_disabled.gif";

document.write('');

if(fEnable)
 document.write('');
if (drawing_app) {
 document.write(' ');
 document.write('');
}

document.write('</td> </tr></table>');

if (! drawing_app && !false) {
 document.write('</td> <td align=right valign=top>');
 document.write('' +
 '' +
 '');
}
document.write('</td> </tr></table>');
}
//-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/navigation\\_bar.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/navigation_bar.htm)

```

//<!--
WriteBody();//-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/navigation\\_bar.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/navigation_bar.htm)

```

restore()

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_navigation\\_bar.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_navigation_bar.htm)

```

//<!--

function restore() {
if(navigator.platform != "MacPPC")
 self.location.reload();
}

function writebody() {

 if (parent.g_showoutline) {
 document.write('<table border=0 valign=top cellpadding=0 width=\\"100%\">' +
 '<tr valign=top><td align=left valign=top>');
 document.write('<img'
 src=\\"outline.gif\" title=\\"Show/Hide Outline\" alt=\\"Show/Hide Outline\" border=0>');
 document.write('</td>');
 if(parent.g_outline_href == parent.OUTLINE_EXPAND_HREF) {

```

```

 document.write('<td align=right valign=top>' +
 '' +
 '</td>');
 } else {
 document.write('<td align=right valign=top>' +
 ''
+
 '</td>');
 }
 document.write("&</tr></table>");
}
else {
 document.write('<table border=0 valign=top cellspacing=0 width=\\"100%\"><td
align=\\"left\"><img border=0 src=\\"outline.gif\"
title=\\"Show/Hide Outline\" alt=\\"Show/Hide Outline\"></td></table>');
}
} //-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_navigation\\_bar.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_navigation_bar.htm)

```

//<!--
writebody();
//-->

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID1 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID2 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID3 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID4 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID5 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID6 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID7 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID8 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID9 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID10 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID11 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID12 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID13 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID14 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID15 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID16 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID17 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID18 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID19 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID20 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID21 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID22 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('1')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('2')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('3')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('4')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('5')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('6')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('7')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('8')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('9')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('10')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('11')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('12')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('13')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('14')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('15')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('16')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('17')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('18')
```



[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('19')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('20')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('21')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.Slide('22')
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
parent.base.hlite();
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/outline_collapsed.htm)

```
self.location.reload();
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
if (parent.base.msie < 0) {
 document.captureEvents(Event.MOUSEDOWN);
 document.captureEvents(Event.KEYPRESS);
 document.onkeypress = _KPH;
 document.onmousedown = _KPH;
}

function restore() {
 if (parent.base.msie < 0)
 self.location.reload();
}
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
function flatLoad() {
 if (!parent.IsFullScrMode())
 parent.base.highlite();
 DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0045.htm");
}
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
//<!--
function DoOnLoad() {
}//-->
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
flatLoad()
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
DocumentOnClick(event)
```

[http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010\\_files/slide0045.htm](http://wcubec.snu.ac.kr/lecture/spot-check-BEC-2010_files/slide0045.htm)

```
_KPH(event)
```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture1\\_LaserCooling\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if (!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if (g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
```

```

_RSW()
if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();

}

}

function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}

function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}

function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}

var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
}

```

```

 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {
 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
}

```

```
else if (...
```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture1\\_LaserCooling\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
```

```

function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

```

```

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if (event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture1\\_LaserCooling\\_files/slide0029.htm](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture1_LaserCooling_files/slide0029.htm)

```

function flatLoad() {
if (!parent.IsFullScrMode())
 parent.base.highlite();
DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0029.htm");
}

```

[http://wcubec.snu.ac.kr/lecture/AMP01\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP01_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame|| (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn))
 document.oncontextmenu=parent._CM;
 self.focus();
}

```

```

}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playList();
 parent.createCM();
}

```



```

if(!g_supportsPPTHTML) return
if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
self.focus();

}
var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

```
//<!--
function restore() {
if(navigator.platform != "MacPPC")
 self.location.reload();
}

function WriteBody()
{
 if(window.name != "PPTNav") return;

 document.writeln('<table width="\100%" border=0 valign=top cellpadding=0 cellspacing=0> <tr> ');
 drawing_app = false;
 if (parent.includeNotes && !false) {

 document.write('<td align=left>' +
 ' ' + ' </td> '
);

 }

 document.write('<td align=center valign=top> <table border=0 valign=top cellpadding=0 cellspacing=0>
<tr><td align=right>');

 innerText = "";
 if (parent.GetHrefObj(parent.g_currentSlide).m_origVisibility == 1 && !parent.g_allHidden)
 innerText = "Slide " + parent.GetCurrentSlideNum() + " of " + parent.GetNumSlides();
 else
 innerText = "Hidden Slide";

 if (drawing_app) {
 document.write('');
 document.write(' ');
 }

 fEnable = ((parent.g_currentSlide != 1 && parent.GetHrefObj(parent.g_currentSlide - 1).m_visibility ==
1)) ||
 (parent.GetCurrentSlideNum() > 1);

 if(fEnable)
 {
 prevBtn = "prev_active.gif";
 document.write('');
 }
 else
 prevBtn = "prev_disabled.gif";

 document.write('');

 if(fEnable)
 document.write('');

 document.write('</td> <td align=center> ')
 document.write(' ' + innerText + '
 ');
 document.write('</td> <td align=left>');

 fEnable = (parent.GetCurrentSlideNum() != parent.GetNumSlides());
 if(fEnable)
 {
 nextBtn = "next_active.gif";
 document.write('');
 }
 else
 nextBtn = "next_disabled.gif";

 document.write('');

 if(fEnable)
 document.write('');
 if (drawing_app) {
 document.write(' ');
 document.write('');
 }
}
```

```

document.write('</td> </tr></table>');

if (! drawing_app && !false) {
 document.write('</td> <td align=right valign=top>');
 document.write(' ' +
 '' +
 '');
}
document.write('</td> </tr></table>');
}
//-->

```

[http://wcubec.snu.ac.kr/lecture/AMP01\\_files/slide0021.htm](http://wcubec.snu.ac.kr/lecture/AMP01_files/slide0021.htm)

```

function flatLoad() {
if (!parent.IsFullScrMode())
 parent.base.highlite();
DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0021.htm");
}

```

[http://wcubec.snu.ac.kr/lecture/AMP14\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP14_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)

```

```

 SlideObj.filters.revealtrans.Play()
 }
 function MakeNotesVis()
 {
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
 }
 function Redirect(frmId,sId)
 {
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
 }
 function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
 function IsWin(name) { return window.name == name }
 function IsNts() { return IsWin("PPTNts") }
 function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
 function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
 function SupportsPPTHTML()
 {
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
 }
 var MHTMLPrefix = CalculateMHTMLPrefix();
 function CalculateMHTMLPrefix()
 {
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
 }
 function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
 }
 var hasNarration = false;
 function _RSW()
 {
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return
 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 }

```

```

factor=(1.0*cltWidth)/g_origW
if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

newSize = g_origSz * factor
if(newSize < 1) newSize=1

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if ((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP14\\_files/slide0023.htm](http://wcubec.snu.ac.kr/lecture/AMP14_files/slide0023.htm)

```

function flatLoad() {
if (!parent.IsFullScrMode())
 parent.base.highlite();
DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0023.htm");
}

```

```
}
```

[http://wcubec.snu.ac.kr/lecture/newlight\\_files/script.js](http://wcubec.snu.ac.kr/lecture/newlight_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 }
 self.focus();
}

function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}

function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}

function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
```

```

navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

```

```

}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event))) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/newlight\\_files/slide0047.htm](http://wcubec.snu.ac.kr/lecture/newlight_files/slide0047.htm)

```

function flatLoad() {
 if (!parent.IsFullScrMode())
 parent.base.highlite();
 DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0047.htm");
}

```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/script.js](http://wcubec.snu.ac.kr/lecture/light-teal_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}

```



```

 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playList();
}

```

```

parent.createCM();
if(!g_supportsPPTHTML) return
if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
self.focus();

}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/slide0075.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/slide0075.htm)

```
function flatLoad() {
 if (!parent.IsFullScrMode())
 parent.base.hlhlite();
 DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0075.htm");
}
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID23 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID24 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID25 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID26 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID27 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID28 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID29 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID30 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID31 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID32 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID33 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID34 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID35 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID36 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID37 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('23')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('24')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('25')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('26')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('27')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('28')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('29')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('30')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('31')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('32')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('33')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('34')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('35')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('36')
```

[http://wcubec.snu.ac.kr/lecture/light-teal\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture/light-teal_files/outline_collapsed.htm)

```
parent.base.Slide('37')
```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture2\\_Trapping\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture2_Trapping_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
```

```

 document.oncontextmenu=parent._CM;
 self.focus();

 }

}

function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}

function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}

function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}

var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
}

```

```

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
 29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```



[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture3\\_MakingBEC\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture3_MakingBEC_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn))
 document.oncontextmenu=parent._CM;
 self.focus();
}

function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}

function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}

function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return (IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
```

```

Explorer "), ver=0
if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
else
 ver=parseInt(appVer)

return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{

```

```

 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture4\\_BEChtheory\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture4_BEChtheory_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 }
}

```

```

 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return (IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}
var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor

```

```

s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if ((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture4\\_BECtheory\\_files/slide0025.htm](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture4_BECtheory_files/slide0025.htm)

```

function flatLoad() {
 if (!parent.IsFullScrMode())
 parent.base.highlite();
 DoOnLoad();

 if (parent.IsFullScrMode() && parent.NavPopup && !parent.NavPopup.closed)
 parent.NavPopup.focus();
 else
 self.focus();
 parent.base.SldUpdated("slide0025.htm");
}

```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture5\\_TrappedBEC\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture5_TrappedBEC_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else

```

```

 ver=parseInt(appVer)

 return(ver >= 4)
 }
 var MHTMLPrefix = CalculateMHTMLPrefix();
 function CalculateMHTMLPrefix()
 {
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
 }

 function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
 }

 var hasNarration = false;
 function _RSW()
 {
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
 }

 function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
 }

 function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
 }

 function _KPH(event)
 {
 if (parent.base.msie < 0) {
 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 }

```

```

if(IsContextMenu())
 return parent.KPH(event);
if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
}
else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
else if (...

```

[http://wcubec.snu.ac.kr/Lecture\\_Shin/Lecture6\\_PhaseCoherence\\_files/script.js](http://wcubec.snu.ac.kr/Lecture_Shin/Lecture6_PhaseCoherence_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{

```



```

var str=document.location.hash,idx=str.indexOf('#')
if(idx>=0) str=str.substr(1);
if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
}
return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}
var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;

```

```

 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if ((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP02\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP02_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn))
 document.oncontextmenu=parent._CM;
 self.focus();
}
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {

```

```

 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

```

```

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && ((window.name != "PPTSld"))))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
 29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP03\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP03_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{

```

```

if(!g_supportsPPTHTML) return
if(slideId)
 parent.base.SldUpdated(slideId)
g_origSz=parseInt(SlideObj.style.fontSize)
g_origH=SlideObj.style.posHeight
g_origW=SlideObj.style.posWidth
g_scaleHyperlinks=(document.all.tags("AREA").length>0)
if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.higlite();
if(g_scaleHyperlinks)
 InitHLinkArray()
if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
_RSW()
if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
}
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}

```

```

}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)

```

```

 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP11\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP11_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {

```

```

 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#" + sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 }
}

```



```

 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if ((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP12\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP12_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);

```

```

 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
}
SlideObj.style.visibility="visible"
if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
playList();
parent.createCM();
if(!g_supportsPPHTML) return
if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
self.focus();
}
var hasNarration = false;
function _RSW()
{
}

```

```

if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && ((window.name != "PPTSld"))))
 return

cltWidth=document.body.clientWidth
cltHeight=document.body.clientHeight
factor=(1.0*cltWidth)/g_origW
if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

newSize = g_origSz * factor
if(newSize < 1) newSize=1

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
 29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP13\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP13_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)

```

```

g_origSz=parseInt(SlideObj.style.fontSize)
g_origH=SlideObj.style.posHeight
g_origW=SlideObj.style.posWidth
g_scaleHyperlinks=(document.all.tags("AREA").length>0)
if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.hightlight();
if(g_scaleHyperlinks)
 InitHLLinkArray()
if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
_RSW()
if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
}
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()

```

```

{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if (!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))

```

```

 return parent.KPH(event);
 else if ((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP15\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP15_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
}

```

```

 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)

```

```

 ScaleHyperlinks(factor);
 }
 function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
 }

 function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
 }
 function _KPH(event)
 {
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
 29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP16\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP16_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
}

```



```

 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playlist();
 parent.createCM();
 if(!g_supportsPPHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}
var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return
}

```

```

cltWidth=document.body.clientWidth
cltHeight=document.body.clientHeight
factor=(1.0*cltWidth)/g_origW
if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

newSize = g_origSz * factor
if(newSize < 1) newSize=1

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP17\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP17_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth

```

```

g_scaleHyperlinks=(document.all.tags("AREA").length>0)
if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.hlhlite();
if(g_scaleHyperlinks)
 InitHLinkArray()
if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
_RSW()
if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
}
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)

```

```

 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")

```

```

 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP18\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP18_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

```

```

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {

```

```

return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
//Nav Only function
return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP19\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP19_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)

```

```

 SlideObj.filters.revealtrans.Play()
 }
 function MakeNotesVis()
 {
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
 }
 function Redirect(frmId,sId)
 {
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
 }
 function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
 function IsWin(name) { return window.name == name }
 function IsNts() { return IsWin("PPTNts") }
 function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
 function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
 function SupportsPPTHTML()
 {
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
 }
 var MHTMLPrefix = CalculateMHTMLPrefix();
 function CalculateMHTMLPrefix()
 {
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
 }
 function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
 }
 var hasNarration = false;
 function _RSW()
 {
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return
 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 }

```



```

factor=(1.0*cltWidth)/g_origW
if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

newSize = g_origSz * factor
if(newSize < 1) newSize=1

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP20\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP20_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
}

```

```

if(g_scaleHyperlinks)
 InitHLinkArray()
if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"

_RSW()
if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();

 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop=-(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld") || IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)

```

```

 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 }
}

```

```

 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP21\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP21_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }

```

```

function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && ((window.name != "PPTSld"))))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

```

```

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP22\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP22_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()

```

```

{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

```

```

newSize = g_origSz * factor
if(newSize < 1) newSize=1

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP23\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP23_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))

```



```

 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
}

```

```

 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }
 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {

 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
 event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
 (event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
 29) || (event.which == 31) || (event.which == 12)))
 }

```

```

 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture/AMP24\\_files/script.js](http://wcubec.snu.ac.kr/lecture/AMP24_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.higlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 }
 self.focus();
}

function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}

function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
 return 1
}

function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}

function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&

```

```

navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor
 s.posLeft=(cltWidth-s.posWidth)/2
 s.posTop=(cltHeight-s.posHeight)/2

 if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
 }

 if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

```

```

}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event))) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }

 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/script.js](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/script.js)

```

var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlight();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame || (IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
}

```

```

nObj = document.all.item("NotesObj")
parent.SetHasNts(0)
if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
}
return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inex = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inex >= 0)
 ver=parseFloat(appVer.substring(inex+18, appVer.indexOf(";",inex)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}
function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}
var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

```

```

s=SlideObj.style
s.fontSize=newSize+"px"
s.posWidth=g_origW*factor
s.posHeight=g_origH*factor
s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}
if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}
function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}
function _KPH(event)
{
 if (parent.base.msie < 0) {

 if (((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && ((!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1)))
 return parent.KPH(event);
 else if((event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID38 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID39 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID40 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID41 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID42 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID43 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID44 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID45 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID46 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID47 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID48 VISIBILITY=hidden >></ilayer>'); }
```



[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID49 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID50 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID51 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID52 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID53 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID54 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID55 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID56 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID57 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('38')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('39')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('40')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('41')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('42')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('43')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('44')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('45')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('46')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('47')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('48')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('49')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('50')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('51')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('52')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('53')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('54')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('55')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('56')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/quantum-world\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/quantum-world_files/outline_collapsed.htm)

```
parent.base.Slide('57')
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/script.js](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/script.js)

```
var CtxAlwaysOn = false;
function LoadSld(slideId)
{
 if(!g_supportsPPTHTML) return
 if(slideId)
 parent.base.SldUpdated(slideId)
 g_origSz=parseInt(SlideObj.style.fontSize)
 g_origH=SlideObj.style.posHeight
 g_origW=SlideObj.style.posWidth
 g_scaleHyperlinks=(document.all.tags("AREA").length>0)
 if (IsWin("PPTSld") && !parent.IsFullScrMode())
 parent.base.highlite();
 if(g_scaleHyperlinks)
 InitHLinkArray()
 if(g_scaleInFrame||(IsWin("PPTSld") && parent.IsFullScrMode()))
 document.body.scroll="no"
 _RSW()
 if(IsWin("PPTSld") && (parent.IsFullScrMode() || CtxAlwaysOn)) {
 document.oncontextmenu=parent._CM;
 self.focus();
 }
}
function MakeSldVis(fTrans)
{
 fTrans=fTrans && g_showAnimation
 if(fTrans)
 {
 if(g_bgSound) {
 idx=g_bgSound.indexOf(",");
 pptSound.src=g_bgSound.substr(0, idx);
 pptSound.loop= -(parseInt(g_bgSound.substr(idx+1)));
 }
 SlideObj.filters.revealtrans.Apply()
 }
 SlideObj.style.visibility="visible"
 if(fTrans)
 SlideObj.filters.revealtrans.Play()
}
function MakeNotesVis()
{
 if(!IsNts()) return false
 SlideObj.style.display="none"
 nObj = document.all.item("NotesObj")
 parent.SetHasNts(0)
 if(nObj) {
 nObj.style.display=""
 parent.SetHasNts(1)
 }
}
```

```

 }
 return 1
}
function Redirect(frmId,sId)
{
 var str=document.location.hash,idx=str.indexOf('#')
 if(idx>=0) str=str.substr(1);
 if(window.name != frmId && (sId != str)) {
 obj = document.all.item("Main-File")
 window.location.href=obj.href+"#"+sId
 return 1
 }
 return 0
}
function HideMenu() { if(frames["PPTSld"] && PPTSld.document.all.item("ctxtmenu") &&
PPTSld.ctxtmenu.style.display!="none") { PPTSld.ctxtmenu.style.display='none'; return true } return false }
function IsWin(name) { return window.name == name }
function IsNts() { return IsWin("PPTNts") }
function IsSldOrNts() { return(IsWin("PPTSld")||IsWin("PPTNts")) }
function SupportsPPTAnimation() { return(navigator.platform == "Win32" &&
navigator.appVersion.indexOf("Windows")>0) }
function SupportsPPTHTML()
{
 var appVer=navigator.appVersion, msie=appVer.indexOf("MSIE "), inx = appVer.indexOf("Internet
Explorer "), ver=0
 if(msie >= 0)
 ver=parseFloat(appVer.substring(msie+5, appVer.indexOf(";",msie)))
 else if(inx >= 0)
 ver=parseFloat(appVer.substring(inx+18, appVer.indexOf(";",inx)))
 else
 ver=parseInt(appVer)

 return(ver >= 4)
}
var MHTMLPrefix = CalculateMHTMLPrefix();
function CalculateMHTMLPrefix()
{
 if (document.location.protocol == 'mhtml:') {
 href=new String(document.location.href)
 Start=href.indexOf('!')+1
 End=href.lastIndexOf('/')+1
 if (End < Start)
 return href.substring(0, Start)
 else
 return href.substring(0, End)
 }
 return '';
}

function LoadNavSld(slideId) {
 playList();
 parent.createCM();
 if(!g_supportsPPTHTML) return
 if(IsWin("PPTSld") && slideId)
 parent.base.SldUpdated(slideId)
 self.focus();
}

var hasNarration = false;
function _RSW()
{
 if(!g_supportsPPTHTML || IsNts() ||
 (!g_scaleInFrame && (window.name != "PPTSld")))
 return

 cltWidth=document.body.clientWidth
 cltHeight=document.body.clientHeight
 factor=(1.0*cltWidth)/g_origW
 if(cltHeight < g_origH*factor)
 factor=(1.0*cltHeight)/g_origH

 newSize = g_origSz * factor
 if(newSize < 1) newSize=1

 s=SlideObj.style
 s.fontSize=newSize+"px"
 s.posWidth=g_origW*factor
 s.posHeight=g_origH*factor

```

```

s.posLeft=(cltWidth-s.posWidth)/2
s.posTop=(cltHeight-s.posHeight)/2

if (hasNarration) {
 obj = document.all.NSPlay.style;
 mySld = document.all.SlideObj.style;
 obj.position = 'absolute';
 obj.posTop = mySld.posTop + mySld.posHeight - 20;
 obj.posLeft = mySld.posLeft + mySld.posWidth - 20;
}

if(g_scaleHyperlinks)
 ScaleHyperlinks(factor);
}

function IsMac() {
 return (window.navigator.platform.indexOf("Mac") >= 0);
}

function HitOK(evt) {
 //Nav Only function
 return (evt.which == 1 || (IsMac() && evt.which == 3));
}

function _KPH(event)
{
 if (parent.base.msie < 0) {
 if ((event.target.name && event.target.name == "hasMap") || (event.target.href &&
event.target.href != "") && parent.g_docTable[0].type != "jpeg" && HitOK(event)) {
 return; /* to make hyperlinks in fullscreen mode traversable */
 }
 }
 if(IsContextMenu())
 return parent.KPH(event);
 if (parent.IsFullScrMode() && event.which == 27)
 parent.base.CloseFullScreen();
 else if (parent.base.IsFullScrMode() && (!IsMac() && event.which == 3) || (IsMac() &&
(event.modifiers & Event.CONTROL_MASK) && event.which == 1))
 return parent.KPH(event);
 else if (event.which == 32) || (event.which == 13) || HitOK(event)) {
 if(window.name == "PPTSld")
 parent.PPTSld.DocumentOnClick();
 else
 parent.M_GoNextSld();
 }
 else if (parent.IsFullScrMode() && ((event.which == 78) || (event.which == 110) || (event.which ==
29) || (event.which == 31) || (event.which == 12)))
 parent.M_GoNextSld();
 else if (...

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID58 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID59 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```

if (parent.base.isnav) { document.write('<ilayer id= LAYERID60 VISIBILITY=hidden >></ilayer>'); }

```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID61 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID62 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID63 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID64 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID65 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID66 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID67 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID68 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID69 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID70 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID71 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID72 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID73 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID74 VISIBILITY=hidden >></ilayer>'); }
```

[http://wcubec.snu.ac.kr/lecture\\_Jeong/Measurement-and-Decoherence\\_files/outline\\_collapsed.htm](http://wcubec.snu.ac.kr/lecture_Jeong/Measurement-and-Decoherence_files/outline_collapsed.htm)

```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID75 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID76 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID77 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID78 VISIBILITY=hidden >></ilayer>'); }
```

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```
if (parent.base.isnav) { document.write('<ilayer id= LAYERID79 VISIBILITY=hidden >></ilayer>'); }
```

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```
parent.base.Slide('58')
```

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```
parent.base.Slide('59')
```

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```
parent.base.Slide('60')
```

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```
parent.base.Slide('61')
```

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```
parent.base.Slide('62')
```

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```
parent.base.Slide('63')
```

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```
parent.base.Slide('64')
```

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```
parent.base.Slide('65')
```

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```
parent.base.Slide('66')
```

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```
parent.base.Slide('67')
```

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```
parent.base.Slide('68')
```

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```
parent.base.Slide('69')
```

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```
parent.base.Slide('70')
```

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```
parent.base.Slide('71')
```

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```
parent.base.Slide('72')
```

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```
parent.base.Slide('73')
```

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```
parent.base.Slide('74')
```

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```
parent.base.Slide('75')
```

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```
parent.base.Slide('76')
```

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```
parent.base.Slide('77')
```

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```
parent.base.Slide('78')
```

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```
parent.base.Slide('79')
```

## 쿠키

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이름	첫세트	도메인	보안
값	요청 URL		만료